Psychology as a Social Science 175.101

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The Diener Education Fund (DEF) is a non-profit organization founded with the mission of re-inventing higher education to serve the changing needs of students and professors. The initial focus of the DEF is on making information, especially of the type found in textbooks, widely available to people of all backgrounds. This mission is embodied in the Noba project.

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- To reduce financial burden on students by providing access to free educational content
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The Diener Education Fund was co-founded by Drs. Ed and Carol Diener. Ed was a professor emeritus at the University of Illinois, Urbana Champaign, and a professor at University of Virginia and the University of Utah, and a senior scientist at the Gallup Organization but passed away in April 2021. For more information, please see **http://noba.to/78vdj2x5**. Carol Diener is the former director of the Mental Health Worker and the Juvenile Justice Programs at the University of Illinois. Both Ed and Carol are award- winning university teachers.

Acknowledgements

Research in Psychology

1
Research Designs

Christie Napa Scollon

Psychologists test research questions using a variety of methods. Most research relies on either correlations or experiments. With correlations, researchers measure variables as they naturally occur in people and compute the degree to which two variables go together. With experiments, researchers actively make changes in one variable and watch for changes in another variable. Experiments allow researchers to make causal inferences. Other types of methods include longitudinal and quasi-experimental designs. Many factors, including practical constraints, determine the type of methods researchers use. Often researchers survey people even though it would be better, but more expensive and time consuming, to track them longitudinally.

Learning Objectives

- Articulate the difference between correlational and experimental designs.
- Understand how to interpret correlations.
- Understand how experiments help us to infer causality.
- Understand how surveys relate to correlational and experimental research.
- Explain what a longitudinal study is.
- List a strength and weakness of different research designs.

Research Designs

In the early 1970's, a man named Uri Geller tricked the world: he convinced hundreds of thousands of people that he could bend spoons and slow watches using only the power of his mind. In fact, if you were in the audience, you would have likely believed he had psychic powers. Everything looked authentic—this man had to have paranormal abilities! So, why have you probably never heard of him before? Because when Uri was asked to perform his miracles in line with scientific experimentation, he was no longer able to do them. That is, even though it seemed like he was doing the impossible, when he was tested by science, he proved to be nothing more than a clever magician.

When we look at dinosaur bones to make educated guesses about extinct life, or systematically chart the heavens to learn about the relationships between stars and planets, or study magicians to figure out how they perform their tricks, we are forming observations—the foundation of science. Although we are all familiar with the saying "seeing is believing," conducting science is more than just what your eyes perceive. Science is the result of systematic and intentional study of the natural world. And psychology is no different. In the movie *Jerry Maguire*, Cuba Gooding, Jr. became famous for using the phrase, "Show me the money!" In psychology, as in all sciences, we might say, "Show me the data!"

One of the important steps in scientific inquiry is to test our research questions, otherwise known as hypotheses. However, there are many ways to test hypotheses in psychological research. Which method you choose will depend on the type of questions you are asking, as well as what resources are available to you. All methods have limitations, which is why the best research uses a variety of methods.

Most psychological research can be divided into two types: experimental and correlational research.

Experimental Research

If somebody gave you $20 that absolutely had to be spent today, how would you choose to spend it? Would you spend it on an item you've been eyeing for weeks, or would you donate the money to charity? Which option do you think would bring you the most happiness? If you're like most people, you'd choose to spend the money on yourself (duh, right?). Our intuition is that we'd be happier if we spent the money on ourselves.

Knowing that our intuition can sometimes be wrong, Professor Elizabeth Dunn (2008) at the University of British Columbia set out to conduct an experiment on spending and happiness. She gave each of the participants in her experiment $20 and then told them they had to spend

At the Corner Perk Cafe customers routinely pay for the drinks of strangers. Is this the way to get the most happiness out of a cup of coffee? Elizabeth Dunn's research shows that spending money on others may affect our happiness differently than spending money on ourselves. [Image: The Island Packet, https://goo.gl/DMxA5n]

the money by the end of the day. Some of the participants were told they must spend the money on themselves. Some students were told they must spend the money on others, such as a charity or a gift for someone. At the end of the day she measured participants' levels of happiness using a self-report questionnaire. (But wait, how do you measure something like happiness when you can't really see it? Psychologists measure many abstract concepts, such as happiness and intelligence, by beginning with **operational definitions** of the concepts. See the Noba modules on Intelligence [**http://noba.to/ncb2h79v**] and Happiness [**http://noba.to/qnw7g32t**], respectively, for more information on specific measurement strategies.)

In an experiment, researchers manipulate, or cause changes, in the **independent variable**, and observe or measure any impact of those changes in the **dependent variable**. The independent variable is the one under the experimenter's control, or the variable that is intentionally altered between groups. In the case of Dunn's experiment, the independent variable was whether participants spent the money on themselves or on others. The dependent variable is the variable that is not manipulated at all, or the one where the effect happens. One way to help remember this is that the dependent variable "depends" on what happens to the independent variable. In our example, the participants' happiness (the dependent variable in this experiment) depends on how the participants spend their money (the independent variable). Thus, any observed changes or group differences in happiness can be attributed to whom the money was spent on. What Dunn and her colleagues found was that, after all the spending had been done, the people who had spent the money on others were happier than those who had spent the money on themselves. In other words, spending on others causes us to be happier than spending on ourselves. Do you find this surprising?

But wait! Doesn't happiness depend on a lot of different factors—for instance, a person's upbringing or life circumstances? What if some people had happy childhoods and that's why they're happier? Or what if some people dropped their toast that morning and it fell jam-side down and ruined their whole day? It is correct to recognize that these factors and many more

can easily affect a person's level of happiness. So how can we accurately conclude that spending money on others causes happiness, as in the case of Dunn's experiment?

The most important thing about experiments is <u>random assignment</u>. Participants don't get to pick which condition they are in (e.g., participants didn't choose whether they were supposed to spend the money on themselves versus others). The experimenter assigns them to a particular condition based on the flip of a coin or the roll of a die or any other random method. Why do researchers do this? With Dunn's study, there is the obvious reason: you can imagine which condition most people would choose to be in, if given the choice. But another equally important reason is that random assignment makes it so the groups, on average, are similar on all characteristics except what the experimenter manipulates.

By randomly assigning people to conditions (self-spending versus other-spending), some people with happy childhoods should end up in each condition. Likewise, some people who had dropped their toast that morning (or experienced some other disappointment) should end up in each condition. As a result, the distribution of all these factors will generally be consistent across the two groups, and this means that on average the two groups will be relatively equivalent on all these factors. Random assignment is critical to experimentation because if the only difference between the two groups is the independent variable, we can infer that the independent variable is the cause of any observable difference (e.g., in the amount of happiness they feel at the end of the day).

Here's another example of the importance of random assignment: Let's say your class is going to form two basketball teams, and you get to be the captain of one team. The class is to be divided evenly between the two teams. If you get to pick the players for your team first, whom will you pick? You'll probably pick the tallest members of the class or the most athletic. You probably won't pick the short, uncoordinated people, unless there are no other options. As a result, your team will be taller and more athletic than the other team. But what if we want the teams to be fair? How can we do this when we have people of varying height and ability? All we have to do is randomly assign players to the two teams. Most likely, some tall and some short people will end up on your team, and some tall and some short people will end up on the other team. The average height of the teams will be approximately the same. That is the power of random assignment!

Other considerations

In addition to using random assignment, you should avoid introducing confounds into your experiments. <u>Confounds</u> are things that could undermine your ability to draw causal

inferences. For example, if you wanted to test if a new happy pill will make people happier, you could randomly assign participants to take the happy pill or not (the independent variable) and compare these two groups on their self-reported happiness (the dependent variable). However, if some participants know they are getting the happy pill, they might develop expectations that influence their self-reported happiness. This is sometimes known as a **placebo effect**. Sometimes a person just knowing that he or she is receiving special treatment or something new is enough to actually cause changes in behavior or perception: In other words, even if the participants in the happy pill condition were to report being happier, we wouldn't know if the pill was actually making them happier or if it was the placebo effect—an example of a confound. A related idea is **participant demand**. This occurs when participants try to behave in a way they think the experimenter wants them to behave. Placebo effects and participant demand often occur unintentionally. Even **experimenter expectations** can influence the outcome of a study. For example, if the experimenter knows who took the happy pill and who did not, and the dependent variable is the experimenter's observations of people's happiness, then the experimenter might perceive improvements in the happy pill group that are not really there.

One way to prevent these confounds from affecting the results of a study is to use a double-blind procedure. In a double-blind procedure, neither the participant nor the experimenter knows which condition the participant is in. For example, when participants are given the happy pill or the fake pill, they don't know which one they are receiving. This way, the participants are less likely to be influenced by any researcher expectations (called "participant demand"). Likewise, the researcher doesn't know which pill each participant is taking (at least in the beginning—later, the researcher will get the results for data-analysis purposes), which means the researcher's expectations can't influence his or her observations. Therefore, because both parties are "blind" to the condition, neither will be able to behave in a way that introduces a confound. At the end of the day, the only difference between groups will be which pills the participants received, allowing the researcher to determine if the happy pill actually caused people to be happier.

Correlational Designs

When scientists passively observe and measure phenomena it is called correlational research. Here, we do not intervene and change behavior, as we do in experiments. In correlational research, we identify patterns of relationships, but we usually cannot infer what causes what. Importantly, with correlational research, you can examine only two variables at a time, no more and no less.

So, what if you wanted to test whether spending on others is related to happiness, but you don't have $20 to give to each participant? You could use a correlational design—which is exactly what Professor Dunn did, too. She asked people how much of their income they spent on others or donated to charity, and later she asked them how happy they were. Do you think these two variables were related? Yes, they were! The more money people reported spending on others, the happier they were.

More details about the correlation

To find out how well two variables correspond, we can plot the relation between the two scores on what is known as a scatterplot (Figure 1). In the scatterplot, each dot represents a data point. (In this case it's individuals, but it could be some other unit.) Importantly, each dot provides us with two pieces of information—in this case, information about how good the person rated the past month (x-axis) and how happy the person felt in the past month (y-axis). Which variable is plotted on which axis does not matter.
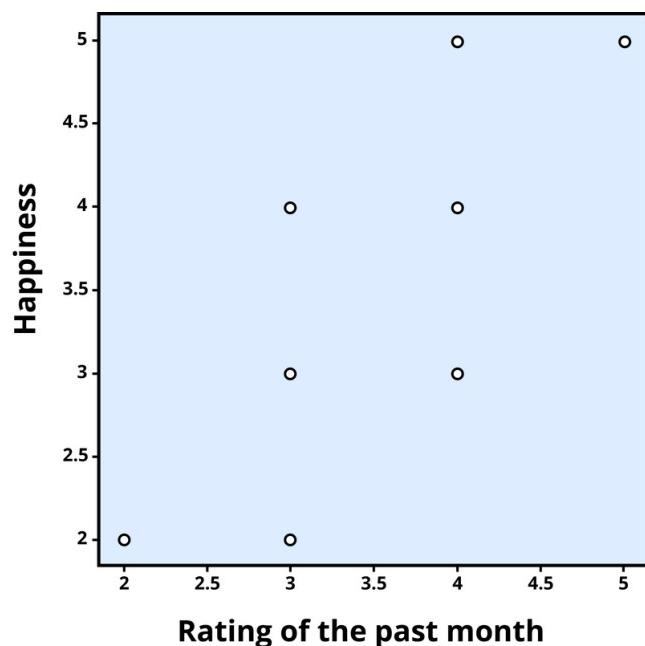
Figure 1. Scatterplot of the association between happiness and ratings of the past month, a positive correlation (r = .81). Each dot represents an individual.

The association between two variables can be summarized statistically using the correlation coefficient (abbreviated as *r*). A correlation coefficient provides information about the direction and strength of the association between two variables. For the example above, the direction of the association is positive. This means that people who perceived the past month as being good reported feeling more happy, whereas people who perceived the month as being bad reported feeling less happy.

With a positive correlation, the two variables go up or down together. In a scatterplot, the dots form a pattern that extends from the bottom left to the upper right (just as they do in Figure 1). The *r* value for a positive correlation is indicated by a positive number (although, the positive sign is usually omitted). Here, the *r* value is .81.

A negative correlation is one in which the two variables move in opposite directions. That is, as one variable goes up, the other goes down. Figure 2 shows the association between the average height of males in a country (y-axis) and the pathogen prevalence (or commonness of disease; x-axis) of that country. In this scatterplot, each dot represents a country. Notice how the dots extend from the top left to the bottom right. What does this mean in real-world terms? It means that people are shorter in parts of the world where there is more disease. The *r* value for a negative correlation is indicated by a negative number—that is, it has a minus (–) sign in front of it. Here, it is –.83.

The strength of a correlation has to do with how well the two variables align. Recall that in Professor Dunn's correlational study, spending on others positively correlated with happiness: The more money people reported spending on others, the happier they reported to be. At this point you may be thinking to yourself, I know a very generous person who gave away lots of money to other people but is miserable! Or maybe you know of a very stingy person who is happy as can be. Yes, there might be exceptions. If an association has many exceptions, it is considered a weak correlation. If an association has few or no exceptions, it

Figure 2. Scatterplot showing the association between average male height and pathogen prevalence, a negative correlation (r = –.83). Each dot represents a country. (Chiao, 2009)

is considered a strong correlation. A strong correlation is one in which the two variables always, or almost always, go together. In the example of happiness and how good the month has been, the association is strong. The stronger a correlation is, the tighter the dots in the scatterplot will be arranged along a sloped line.

The *r* value of a strong correlation will have a high absolute value. In other words, you disregard whether there is a negative sign in front of the r value, and just consider the size of the numerical value itself. If the absolute value is large, it is a strong correlation. A weak correlation is one in which the two variables correspond some of the time, but not most of the time. Figure 3 shows the relation between valuing happiness and grade point average (GPA). People who valued happiness more tended to earn slightly lower grades, but there were lots of exceptions to this. The *r* value for a weak correlation will have a low absolute value. If two variables are so weakly related as to be unrelated, we say they are uncorrelated, and the *r*

value will be zero or very close to zero. In the previous example, is the correlation between height and pathogen prevalence strong? Compared to Figure 3, the dots in Figure 2 are tighter and less dispersed. The absolute value of –.83 is large. Therefore, it is a strong negative correlation.

Can you guess the strength and direction of the correlation between age and year of birth? If you said this is a strong negative correlation, you are correct! Older people always have lower years of birth than younger people (e.g., 1950 vs. 1995), but at the same time, the older people will have a higher age (e.g., 65 vs. 20). In fact, this is a perfect correlation because there are no exceptions to this pattern. I challenge you to find a 10-year-old born before 2003! You can't.

Figure 3. Scatterplot showing the association between valuing happiness and GPA, a weak negative correlation (r = –.32). Each dot represents an individual.

Problems with the correlation

If generosity and happiness are positively correlated, should we conclude that being generous causes happiness? Similarly, if height and pathogen prevalence are negatively correlated, should we conclude that disease causes shortness? From a correlation alone, we can't be certain. For example, in the first case it may be that happiness causes generosity, or that generosity causes happiness. Or, a third variable might cause both happiness *and* generosity, creating the illusion of a direct link between the two. For example, wealth could be the third variable that causes both greater happiness and greater generosity. This is why correlation does not mean causation—an often repeated phrase among psychologists.

Qualitative Designs

Just as correlational research allows us to study topics we can't experimentally manipulate (e.g., whether you have a large or small income), there are other types of research designs that allow us to investigate these harder-to-study topics. Qualitative designs, including participant observation, case studies, and narrative analysis are examples of such methodologies. Although something as simple as "observation" may seem like it would be a part of all research

methods, participant observation is a distinct methodology that involves the researcher embedding him- or herself into a group in order to study its dynamics. For example, Festinger, Riecken, and Shacter (1956) were very interested in the psychology of a particular cult. However, this cult was very secretive and wouldn't grant interviews to outside members. So, in order to study these people, Festinger and his colleagues pretended to be cult members, allowing them access to the behavior and psychology of the cult. Despite this example, it should be noted that the people being observed in a participant observation study usually know that the researcher is there to study them.

Another qualitative method for research is the case study, which involves an intensive examination of specific individuals or specific contexts. Sigmund Freud, the father of psychoanalysis, was famous for using this type of methodology; however, more current examples of case studies usually involve brain injuries. For instance, imagine that researchers want to know how a very specific brain injury affects people's experience of happiness. Obviously, the researchers can't conduct experimental research that involves inflicting this type of injury on people. At the same time, there are too few people who have this type of injury to conduct correlational research. In such an instance, the researcher may examine only one person with this brain injury, but in doing so, the researcher will put the participant through a very extensive round of tests. Hopefully what is learned from this one person can be applied to others; however, even with thorough tests, there is the chance that something unique about this individual (other than the brain injury) will affect his or her happiness. But with such a limited number of possible participants, a case study is really the only type of methodology suitable for researching this brain injury.

The final qualitative method to be discussed in this section is narrative analysis. Narrative analysis centers around the study of stories and personal accounts of people, groups, or cultures. In this methodology, rather than engaging with participants directly, or quantifying their responses or behaviors, researchers will analyze the themes, structure, and dialogue of each person's narrative. That is, a researcher will examine people's personal testimonies in order to learn more about the psychology of those individuals or groups. These stories may be written, audio-recorded, or video-recorded, and allow the researcher not only to study *what* the participant says but *how* he or she says it. Every person has a unique perspective on the world, and studying the way he or she conveys a story can provide insight into that perspective.

Quasi-Experimental Designs

What if you want to study the effects of marriage on a variable? For example, does marriage

make people happier? Can you randomly assign some people to get married and others to remain single? Of course not. So how can you study these important variables? You can use a **quasi-experimental design**.

A quasi-experimental design is similar to experimental research, except that random assignment to conditions is not used. Instead, we rely on existing group memberships (e.g., married vs. single). We treat these as the independent variables, even though we don't assign people to the conditions and don't manipulate the variables. As a result, with quasi-experimental designs causal inference is more difficult. For example, married people might differ on a variety of characteristics from unmarried people. If we find that married participants are happier than single participants, it will be hard to say that marriage causes happiness, because the people who got married might have already been happier than the people who have remained single.

What is a reasonable way to study the effects of marriage on happiness? [Image: Nina Matthews Photography, https://goo.gl/IcmLqg, CC BY-NC-SA, https://goo.gl/HSisdg]

Because experimental and quasi-experimental designs can seem pretty similar, let's take another example to distinguish them. Imagine you want to know who is a better professor: Dr. Smith or Dr. Khan. To judge their ability, you're going to look at their students' final grades. Here, the independent variable is the professor (Dr. Smith vs. Dr. Khan) and the dependent variable is the students' grades. In an experimental design, you would randomly assign students to one of the two professors and then compare the students' final grades. However, in real life, researchers can't randomly force students to take one professor over the other; instead, the researchers would just have to use the preexisting classes and study them as-is (quasi-experimental design). Again, the key difference is random assignment to the conditions of the independent variable. Although the quasi-experimental design (where the students choose which professor they want) may seem random, it's most likely not. For example, maybe students heard Dr. Smith sets low expectations, so slackers prefer this class, whereas Dr. Khan sets higher expectations, so smarter students prefer that one. This now introduces a confounding variable (student intelligence) that will almost certainly have an effect on students' final grades, regardless of how skilled the professor is. So, even though a quasi-

experimental design is similar to an experimental design (i.e., both have independent and dependent variables), because there's no random assignment, you can't reasonably draw the same conclusions that you would with an experimental design.

Longitudinal Studies

Another powerful research design is the longitudinal study. Longitudinal studies track the same people over time. Some longitudinal studies last a few weeks, some a few months, some a year or more. Some studies that have contributed a lot to psychology followed the same people over decades. For example, one study followed more than 20,000 Germans for two decades. From these longitudinal data, psychologist Rich Lucas (2003) was able to determine that people who end up getting married indeed start off a bit happier than their peers who never marry. Longitudinal studies like this provide valuable evidence for testing many theories in psychology, but they can be quite costly to conduct, especially if they follow many people for many years.

Surveys

A survey is a way of gathering information, using old-fashioned questionnaires or the Internet. Compared to a study conducted in a psychology laboratory, surveys can reach a larger number of participants at a much lower cost. Although surveys are typically used for correlational research, this is not always the case. An experiment can be carried out using surveys as well. For example, King and Napa (1998) presented participants with different types of stimuli on paper: either a survey completed by a happy person or a survey completed by an unhappy person. They wanted to see whether happy people were judged as more likely to get into heaven compared to unhappy people. Can you figure out the independent and dependent variables in this study? Can you guess what the results were? Happy people (vs. unhappy people; the independent variable) were

Surveys provide researchers with some significant advantages in gathering data. They make it possible to reach large numbers of people while keeping costs to the researchers and the time commitments of participants relatively low.

judged as more likely to go to heaven (the dependent variable) compared to unhappy people!

Likewise, correlational research can be conducted without the use of surveys. For instance, psychologists LeeAnn Harker and Dacher Keltner (2001) examined the smile intensity of women's college yearbook photos. Smiling in the photos was correlated with being married 10 years later!

Tradeoffs in Research

Even though there are serious limitations to correlational and quasi-experimental research, they are not poor cousins to experiments and longitudinal designs. In addition to selecting a method that is appropriate to the question, many practical concerns may influence the decision to use one method over another. One of these factors is simply resource availability —how much time and money do you have to invest in the research? (Tip: If you're doing a senior honor's thesis, do not embark on a lengthy longitudinal study unless you are prepared to delay graduation!) Often, we survey people even though it would be more precise—but much more difficult—to track them longitudinally. Especially in the case of exploratory research, it may make sense to opt for a cheaper and faster method first. Then, if results from the initial study are promising, the researcher can follow up with a more intensive method.

Beyond these practical concerns, another consideration in selecting a research design is the ethics of the study. For example, in cases of brain injury or other neurological abnormalities, it would be unethical for researchers to inflict these impairments on healthy participants. Nonetheless, studying people with these injuries can provide great insight into human psychology (e.g., if we learn that damage to a particular region of the brain interferes with emotions, we may be able to develop treatments for emotional irregularities). In addition to brain injuries, there are numerous other areas of research that could be useful in understanding the human mind but which pose challenges to a true experimental design— such as the experiences of war, long-term isolation, abusive parenting, or prolonged drug use. However, none of these are conditions we could ethically experimentally manipulate and randomly assign people to. Therefore, ethical considerations are another crucial factor in determining an appropriate research design.

Research Methods: Why You Need Them

Just look at any major news outlet and you'll find research routinely being reported. Sometimes the journalist understands the research methodology, sometimes not (e.g., correlational evidence is often incorrectly represented as causal evidence). Often, the media are quick to

draw a conclusion for you. After reading this module, you should recognize that the strength of a scientific finding lies in the strength of its methodology. Therefore, in order to be a savvy consumer of research, you need to understand the pros and cons of different methods and the distinctions among them. Plus, understanding how psychologists systematically go about answering research questions will help you to solve problems in other domains, both personal and professional, not just in psychology.

Outside Resources

Article: Harker and Keltner study of yearbook photographs and marriage
http://psycnet.apa.org/journals/psp/80/1/112/

Article: Rich Lucas's longitudinal study on the effects of marriage on happiness
http://psycnet.apa.org/journals/psp/84/3/527/

Article: Spending money on others promotes happiness. Elizabeth Dunn's research
https://www.sciencemag.org/content/319/5870/1687.abstract

Article: What makes a life good?
http://psycnet.apa.org/journals/psp/75/1/156/

Discussion Questions

1. What are some key differences between experimental and correlational research?

2. Why might researchers sometimes use methods other than experiments?

3. How do surveys relate to correlational and experimental designs?

Vocabulary

Confounds

Factors that undermine the ability to draw causal inferences from an experiment.

Correlation

Measures the association between two variables, or how they go together.

Dependent variable

The variable the researcher measures but does not manipulate in an experiment.

Experimenter expectations

When the experimenter's expectations influence the outcome of a study.

Independent variable

The variable the researcher manipulates and controls in an experiment.

Longitudinal study

A study that follows the same group of individuals over time.

Operational definitions

How researchers specifically measure a concept.

Participant demand

When participants behave in a way that they think the experimenter wants them to behave.

Placebo effect

When receiving special treatment or something new affects human behavior.

Quasi-experimental design

An experiment that does not require random assignment to conditions.

Random assignment

Assigning participants to receive different conditions of an experiment by chance.

References

Chiao, J. (2009). Culture–gene coevolution of individualism – collectivism and the serotonin transporter gene. *Proceedings of the Royal Society B, 277*, 529-537. doi: 10.1098/rspb.2009.1650

Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. Science, 319(5870), 1687–1688. doi:10.1126/science.1150952

Festinger, L., Riecken, H.W., & Schachter, S. (1956). When prophecy fails. Minneapolis, MN: University of Minnesota Press.

Harker, L. A., & Keltner, D. (2001). Expressions of positive emotion in women\'s college yearbook pictures and their relationship to personality and life outcomes across adulthood. Journal of Personality and Social Psychology, 80, 112–124.

King, L. A., & Napa, C. K. (1998). What makes a life good? Journal of Personality and Social Psychology, 75, 156–165.

Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Re-examining adaptation and the setpoint model of happiness: Reactions to changes in marital status. Journal of Personality and Social Psychology, 84, 527–539.

2
Research Methods in Social Psychology

Rajiv Jhangiani

Social psychologists are interested in the ways that other people affect thought, emotion, and behavior. To explore these concepts requires special research methods. Following a brief overview of traditional research designs, this module introduces how complex experimental designs, field experiments, naturalistic observation, experience sampling techniques, survey research, subtle and nonconscious techniques such as priming, and archival research and the use of big data may each be adapted to address social psychological questions. This module also discusses the importance of obtaining a representative sample along with some ethical considerations that social psychologists face.

Learning Objectives

- Describe the key features of basic and complex experimental designs.
- Describe the key features of field experiments, naturalistic observation, and experience sampling techniques.
- Describe survey research and explain the importance of obtaining a representative sample.
- Describe the implicit association test and the use of priming.
- Describe use of archival research techniques.
- Explain five principles of ethical research that most concern social psychologists.

Introduction

Interested to improve your personal performance? Test your skills in the presence of other people to take advantage of social facilitation. [Image: Hans 905, http://goo.gl/SiOSZh, CC BY-NC-SA 2.0, http://goo.gl/iF4hmM]

Are you passionate about cycling? Norman Triplett certainly was. At the turn of last century he studied the lap times of cycling races and noticed a striking fact: riding in competitive races appeared to improve riders' times by about 20-30 seconds every mile compared to when they rode the same courses alone. Triplett suspected that the riders' enhanced performance could not be explained simply by the slipstream caused by other cyclists blocking the wind. To test his hunch, he designed what is widely described as the first experimental study in social psychology (published in 1898!)—in this case, having children reel in a length of fishing line as fast as they could. The children were tested alone, then again when paired with another child. The results? The children who performed the task in the presence of others out-reeled those that did so alone.

Although Triplett's research fell short of contemporary standards of scientific rigor (e.g., he eyeballed the data instead of measuring performance precisely; Stroebe, 2012), we now know that this effect, referred to as "social facilitation," is reliable—performance on simple or well-rehearsed tasks tends to be enhanced when we are in the presence of others (even when we are not competing against them). To put it another way, the next time you think about showing off your pool-playing skills on a date, the odds are you'll play better than when you practice by yourself. (If you haven't practiced, maybe you should watch a movie instead!)

Research Methods in Social Psychology

One of the things Triplett's early experiment illustrated is scientists' reliance on systematic observation over opinion, or anecdotal evidence. The scientific method usually begins with observing the world around us (e.g., results of cycling competitions) and thinking of an interesting question (e.g., Why do cyclists perform better in groups?). The next step involves generating a specific testable prediction, or hypothesis (e.g., performance on simple tasks is enhanced in the presence of others). Next, scientists must operationalize the variables they are studying. This means they must figure out a way to define and measure abstract concepts.

For example, the phrase "perform better" could mean different things in different situations; in Triplett's experiment it referred to the amount of time (measured with a stopwatch) it took to wind a fishing reel. Similarly, "in the presence of others" in this case was operationalized as another child winding a fishing reel at the same time in the same room. Creating specific operational definitions like this allows scientists to precisely manipulate the independent variable, or "cause" (the presence of others), and to measure the dependent variable, or "effect" (performance)—in other words, to collect data. Clearly described operational definitions also help reveal possible limitations to studies (e.g., Triplett's study did not investigate the impact of another child in the room who was not also winding a fishing reel) and help later researchers replicate them precisely.

Laboratory Research

As you can see, social psychologists have always relied on carefully designed laboratory environments to run experiments where they can closely control situations and manipulate variables (see **the NOBA module on Research Designs** for an overview of traditional methods). However, in the decades since Triplett discovered social facilitation, a wide range of methods and techniques have been devised, uniquely suited to demystifying the mechanics of how we relate to and influence one another. This module provides an introduction to the use of complex laboratory experiments, field experiments, naturalistic observation,

The Asch conformity experiment, which investigated how social pressure influences individual conformity, remains a classic example of a social psychology lab experiment. [Image: D-janous, http://goo.gl/KwuGGM, CC BY-SA 4.0, http://goo.gl/etijyD]

survey research, nonconscious techniques, and archival research, as well as more recent methods that harness the power of technology and large data sets, to study the broad range of topics that fall within the domain of social psychology. At the end of this module we will also consider some of the key ethical principles that govern research in this diverse field.

The use of complex experimental designs, with multiple independent and/or dependent variables, has grown increasingly popular because they permit researchers to study both the individual and joint effects of several factors on a range of related situations. Moreover, thanks to technological advancements and the growth of social neuroscience, an increasing number

of researchers now integrate biological markers (e.g., hormones) or use neuroimaging techniques (e.g., fMRI) in their research designs to better understand the biological mechanisms that underlie social processes.

We can dissect the fascinating research of Dov Cohen and his colleagues (1996) on "culture of honor" to provide insights into complex lab studies. A culture of honor is one that emphasizes personal or family reputation. In a series of lab studies, the Cohen research team invited dozens of university students into the lab to see how they responded to aggression. Half were from the Southern United States (a culture of honor) and half were from the Northern United States (not a culture of honor; this type of setup constitutes a **participant variable** of two levels). Region of origin was independent variable #1. Participants also provided a saliva sample immediately upon arriving at the lab; (they were given a **cover story** about how their blood sugar levels would be monitored over a series of tasks).

The participants completed a brief questionnaire and were then sent down a narrow corridor to drop it off on a table. En route, they encountered a **confederate** at an open file cabinet who pushed the drawer in to let them pass. When the participant returned a few seconds later, the confederate, who had re-opened the file drawer, slammed it shut and bumped into the participant with his shoulder, muttering "asshole" before walking away. In a manipulation of an independent variable—in this case, the insult—some of the participants were insulted publicly (in view of two other confederates pretending to be doing homework) while others were insulted privately (no one else was around). In a third condition—the control group—participants experienced a modified procedure in which they were not insulted at all.

Although this is a fairly elaborate procedure on its face, what is particularly impressive is the number of dependent variables the researchers were able to measure. First, in the public insult condition, the two additional confederates (who observed the interaction, pretending to do homework) rated the participants' emotional reaction (e.g., anger, amusement, etc.) to being bumped into and insulted. Second, upon returning to the lab, participants in all three conditions were told they would later undergo electric shocks as part of a stress test, and were asked how much of a shock they would be willing to receive (between 10 volts and 250 volts). This decision was made in front of two confederates who had already chosen shock levels of 75 and 25 volts, presumably providing an opportunity for participants to publicly demonstrate their toughness. Third, across all conditions, the participants rated the likelihood of a variety of ambiguously provocative scenarios (e.g., one driver cutting another driver off) escalating into a fight or verbal argument. And fourth, in one of the studies, participants provided saliva samples, one right after returning to the lab, and a final one after completing the questionnaire with the ambiguous scenarios. Later, all three saliva samples were tested for levels of cortisol (a hormone associated with stress) and testosterone (a hormone

associated with aggression).

The results showed that people from the Northern United States were far more likely to laugh off the incident (only 35% having anger ratings as high as or higher than amusement ratings), whereas the opposite was true for people from the South (85% of whom had anger ratings as high as or higher than amusement ratings). Also, only those from the South experienced significant increases in cortisol and testosterone following the insult (with no difference between the public and private insult conditions). Finally, no regional differences emerged in the interpretation of the ambiguous scenarios; however, the participants from the South were more likely to choose to receive a greater shock in the presence of the two confederates.
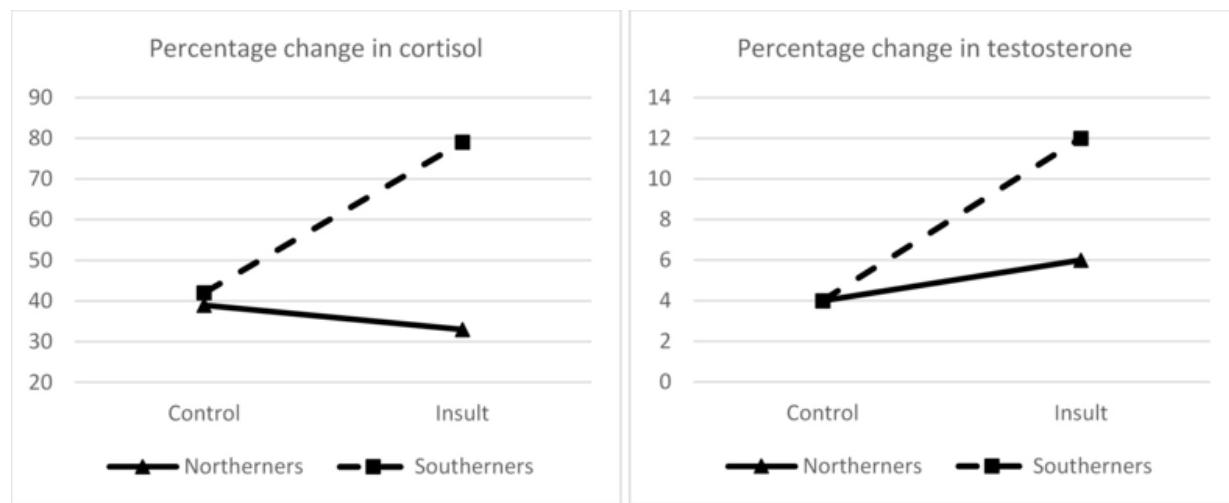
Figure 1

Field Research

Because social psychology is primarily focused on the social context—groups, families, cultures—researchers commonly leave the laboratory to collect data on life as it is actually lived. To do so, they use a variation of the laboratory experiment, called a **field experiment**. A field experiment is similar to a lab experiment except it uses real-world situations, such as people shopping at a grocery store. One of the major differences between field experiments and laboratory experiments is that the people in field experiments do not know they are participating in research, so—in theory—they will act more naturally. In a classic example from 1972, Alice Isen and Paula Levin wanted to explore the ways emotions affect helping behavior. To investigate this they observed the behavior of people at pay phones (I know! *Pay phones!*).

Half of the unsuspecting participants (determined by random assignment) found a dime planted by researchers (I know! *A dime!*) in the coin slot, while the other half did not. Presumably, finding a dime felt surprising and lucky and gave people a small jolt of happiness. Immediately after the unsuspecting participant left the phone booth, a confederate walked by and dropped a stack of papers. Almost 100% of those who found a dime helped to pick up the papers. And what about those who didn't find a dime? Only 1 out 25 of them bothered to help.

In cases where it's not practical or ethical to randomly assign participants to different experimental conditions, we can use naturalistic observation—unobtrusively watching people as they go about their lives. Consider, for example, a classic demonstration of the "basking in reflected glory" phenomenon: Robert Cialdini and his colleagues used naturalistic observation at seven universities to confirm that students are significantly more likely to wear clothing bearing the school name or logo on days following wins (vs. draws or losses) by the school's varsity football team (Cialdini et al., 1976). In another study, by Jenny Radesky and her colleagues (2014), 40 out of 55 observations of caregivers eating at fast food restaurants with children involved a caregiver using a mobile device. The researchers also noted that caregivers who were most absorbed in their device tended to ignore the children's behavior, followed by scolding, issuing repeated instructions, or using physical responses, such as kicking the children's feet or pushing away their hands.
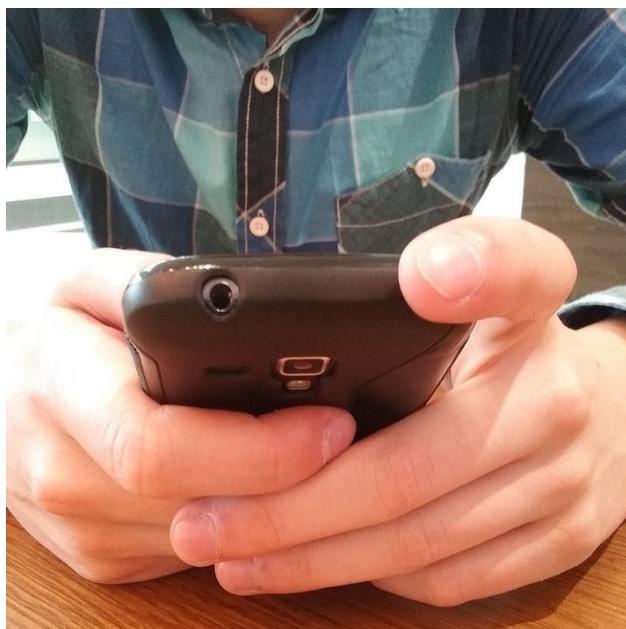
The ubiquitous smart phone provides social psychology researchers with an invaluable tool for working with study participants to gather data about such things as their daily activities, interactions, attitudes, and emotions. [Image: eltpics, http://goo.gl/DWvoUK, CC BY-NC 2.0, http://goo.gl/l8UUGY]

A group of techniques collectively referred to as experience sampling methods represent yet another way of conducting naturalistic observation, often by harnessing the power of technology. In some cases, participants are notified several times during the day by a pager, wristwatch, or a smartphone app to record data (e.g., by responding to a brief survey or scale on their smartphone, or in a diary). For example, in a study by Reed Larson and his colleagues (1994), mothers and fathers carried pagers for one week and reported their emotional states when beeped at random times during their daily activities at work or at home. The results showed that mothers reported experiencing more

positive emotional states when away from home (including at work), whereas fathers showed the reverse pattern. A more recently developed technique, known as the <u>electronically activated recorder</u>, or EAR, does not even require participants to stop what they are doing to record their thoughts or feelings; instead, a small portable audio recorder or smartphone app is used to automatically record brief snippets of participants' conversations throughout the day for later coding and analysis. For a more in-depth description of the EAR technique and other experience-sampling methods, see the NOBA module on **Conducting Psychology Research in the Real World**.

Survey Research

In this diverse world, <u>survey research</u> offers itself as an invaluable tool for social psychologists to study individual and group differences in people's feelings, attitudes, or behaviors. For example, the World Values Survey II was based on large representative samples of 19 countries and allowed researchers to determine that the relationship between income and subjective well-being was stronger in poorer countries (Diener & Oishi, 2000). In other words, an increase in income has a much larger impact on your life satisfaction if you live in Nigeria than if you live in Canada. In another example, a nationally-representative survey in Germany with 16,000 respondents revealed that holding cynical beliefs is related to lower income (e.g., between 2003-2012 the income of the least cynical individuals increased by $300 per month, whereas the income of the most cynical individuals did not increase at all). Furthermore, survey data collected from 41 countries revealed that this negative correlation between cynicism and income is especially strong in countries where people in general engage in more altruistic behavior and tend not to be very cynical (Stavrova & Ehlebracht, 2016).

Of course, obtaining large, cross-cultural, and representative samples has become far easier since the advent of the internet and the proliferation of web-based survey platforms—such as Qualtrics—and participant recruitment platforms—such as Amazon's Mechanical Turk. And although some researchers harbor doubts about the representativeness of online samples, studies have shown that internet samples are in many ways *more* diverse and representative than samples recruited from human subject pools (e.g., with respect to gender; Gosling et al., 2004). Online samples also compare favorably with traditional samples on attentiveness while completing the survey, reliability of data, and proportion of non-respondents (Paolacci et al., 2010).

Subtle/Nonconscious Research Methods

The methods we have considered thus far—field experiments, naturalistic observation, and

surveys—work well when the thoughts, feelings, or behaviors being investigated are conscious and directly or indirectly observable. However, social psychologists often wish to measure or manipulate elements that are involuntary or nonconscious, such as when studying prejudicial attitudes people may be unaware of or embarrassed by. A good example of a technique that was developed to measure people's nonconscious (and often ugly) attitudes is known as the implicit association test (IAT) (Greenwald et al., 1998). This computer-based task requires participants to sort a series of stimuli (as rapidly and accurately as possible) into simple and combined categories while their reaction time is measured (in milliseconds). For example, an IAT might begin with participants sorting the names of relatives (such as "Niece" or "Grandfather") into the categories "Male" and "Female," followed by a round of sorting the names of disciplines (such as "Chemistry" or "English") into the categories "Arts" and "Science." A third round might combine the earlier two by requiring participants to sort stimuli into either "Male or Science" or "Female and Arts" before the fourth round switches the combinations to "Female or Science" and "Male and Arts." If across all of the trials a person is quicker at accurately sorting incoming stimuli into the compound category "Male or Science" than into "Female or Science," the authors of the IAT suggest that the participant likely has a stronger association between males and science than between females and science. Incredibly, this specific gender-science IAT has been completed by more than half a million participants across 34 countries, about 70% of whom show an implicit stereotype associating science with males more than with females (Nosek et al., 2009). What's more, when the data are grouped by country, national differences in implicit stereotypes predict national differences in the achievement gap between boys and girls in science and math. Our automatic associations, apparently, carry serious societal consequences.

Another nonconscious technique, known as priming, is often used to subtly manipulate behavior by activating or making more accessible certain concepts or beliefs. Consider the fascinating example of terror management theory (TMT), whose authors believe that human beings are (unconsciously) terrified of their mortality (i.e., the fact that, some day, we will all die; Pyszczynski et al., 2003). According to TMT, in order to cope with this unpleasant reality (and the possibility that our lives are ultimately essentially meaningless), we cling firmly to systems of cultural and religious beliefs that give our lives meaning and purpose. If this hypothesis is correct, one straightforward prediction would be that people should cling even more firmly to their cultural beliefs when they are subtly reminded of their own mortality.

In one of the earliest tests of this hypothesis, actual municipal court judges in Arizona were asked to set a bond for an alleged prostitute immediately after completing a brief questionnaire. For half of the judges the questionnaire ended with questions about their thoughts and feelings regarding the prospect of their own death. Incredibly, judges in the experimental group that were primed with thoughts about their mortality set a significantly

higher bond than those in the control group ($455 vs. $50!)—presumably because they were especially motivated to defend their belief system in the face of a violation of the law (Rosenblatt et al., 1989). Although the judges consciously completed the survey, what makes this a study of priming is that the second task (sentencing) was unrelated, so any influence of the survey on their later judgments would have been nonconscious. Similar results have been found in TMT studies in which participants were primed to think about death even more subtly, such as by having them complete questionnaires just before or after they passed a funeral home (Pyszczynski et al., 1996).

The research conducted by Rosenblatt and colleagues revealed that even seemingly sophisticated and level-headed thinkers like judges can be influenced by priming. [Image: Penn State, https://goo.gl/mLrmWv, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

To verify that the subtle manipulation (e.g., questions about one's death) has the intended effect (activating death-related thoughts), priming studies like these often include a **manipulation check** following the introduction of a prime. For example, right after being primed, participants in a TMT study might be given a word fragment task in which they have to complete words such as COFF_ _ or SK _ _ L. As you might imagine, participants in the mortality-primed experimental group typically complete these fragments as COFFIN and SKULL, whereas participants in the control group complete them as COFFEE and SKILL.

The use of priming to unwittingly influence behavior, known as **social or behavioral priming** (Ferguson & Mann, 2014), has been at the center of the recent "replication crisis" in Psychology (**see the NOBA module** on replication). Whereas earlier studies showed, for example, that priming people to think about old age makes them walk slower (Bargh, Chen, & Burrows, 1996), that priming them to think about a university professor boosts performance on a trivia game (Dijksterhuis & van Knippenberg, 1998), and that reminding them of mating motives (e.g., sex) makes them more willing to engage in risky behavior (Greitemeyer, Kastenmüller, & Fischer, 2013), several recent efforts to replicate these findings have failed (e.g., Harris et al., 2013; Shanks et al., 2013). Such failures to replicate findings highlight the need to ensure that both the original studies and replications are carefully designed, have adequate sample sizes, and that researchers pre-register their hypotheses and openly share their results—whether these support the initial hypothesis or not.

Archival Research

Imagine that a researcher wants to investigate how the presence of passengers in a car affects drivers' performance. She could ask research participants to respond to questions about their own driving habits. Alternately, she might be able to access police records of the number of speeding tickets issued by automatic camera devices, then count the number of solo drivers versus those with passengers. This would be an example of **archival research**. The examination of archives, statistics, and other records such as speeches, letters, or even tweets, provides yet another window into social psychology. Although this method is typically used as a type of **correlational research** design—due to the lack of control over the relevant variables—archival research shares the higher **ecological validity** of naturalistic observation. That is, the observations are conducted outside the laboratory and represent real world behaviors. Moreover, because the archives being examined can be collected at any time and from many sources, this technique is especially flexible and often involves less expenditure of time and other resources during data collection.

Researchers need not rely only on developing new data to gain insights into human behavior. Existing documentation from decades and even centuries past provide a wealth of information that is useful to social psychologists. [Image: Archivo FSP, http://goo.gl/bUx6sJ, CC BY-SA 3.0, http://goo.gl/g6ncfj]

Social psychologists have used archival research to test a wide variety of hypotheses using real-world data. For example, analyses of major league baseball games played during the 1986, 1987, and 1988 seasons showed that baseball pitchers were more likely to hit batters with a pitch on hot days (Reifman et al., 1991). Another study compared records of race-based lynching in the United States between 1882-1930 to the inflation-adjusted price of cotton during that time (a key indicator of the Deep South's economic health), demonstrating a significant negative correlation between these variables. Simply put, there were significantly more lynchings when the price of cotton stayed flat, and fewer lynchings when the price of cotton rose (Beck & Tolnay, 1990; Hovland & Sears, 1940). This suggests that race-based violence is associated with the health of the economy.

More recently, analyses of social media posts have provided social psychologists with extremely large sets of data ("**big data**") to test creative hypotheses. In an example of research on attitudes about vaccinations, Mitra and her colleagues (2016) collected over 3 million tweets sent by more than 32 thousand users over four years. Interestingly, they found that those who held (and tweeted) anti-vaccination attitudes were also more likely to tweet about their mistrust of government and beliefs in government conspiracies. Similarly, Eichstaedt and his colleagues (2015) used the language of 826 million tweets to predict community-level mortality rates from heart disease. That's right: more anger-related words and fewer positive-emotion words in tweets predicted higher rates of heart disease.

In a more controversial example, researchers at Facebook attempted to test whether emotional contagion—the transfer of emotional states from one person to another—would occur if Facebook manipulated the content that showed up in its users' News Feed (Kramer et al., 2014). And it did. When friends' posts with positive expressions were concealed, users wrote slightly fewer positive posts (e.g., "Loving my new phone!"). Conversely, when posts with negative expressions were hidden, users wrote slightly fewer negative posts (e.g., "Got to go to work. Ugh."). This suggests that people's positivity or negativity can impact their social circles.

The controversial part of this study—which included 689,003 Facebook users and involved the analysis of over 3 million posts made over just one week—was the fact that Facebook did not explicitly request permission from users to participate. Instead, Facebook relied on the fine print in their data-use policy. And, although academic researchers who collaborated with Facebook on this study applied for ethical approval from their institutional review board (IRB), they apparently only did so after data collection was complete, raising further questions about the ethicality of the study and highlighting concerns about the ability of large, profit-driven corporations to subtly manipulate people's social lives and choices.

Research Issues in Social Psychology

The Question of Representativeness

Along with our counterparts in the other areas of psychology, social psychologists have been guilty of largely recruiting samples of convenience from the thin slice of humanity—students —found at universities and colleges (Sears, 1986). This presents a problem when trying to assess the social mechanics of the public at large. Aside from being an overrepresentation of young, middle-class Caucasians, college students may also be more compliant and more susceptible to attitude change, have less stable personality traits and interpersonal relationships, and possess stronger cognitive skills than samples reflecting a wider range of

age and experience (Peterson & Merunka, 2014; Visser, Krosnick, & Lavrakas, 2000). Put simply, these traditional samples (college students) may not be sufficiently representative of the broader population. Furthermore, considering that 96% of participants in psychology studies come from western, educated, industrialized, rich, and democratic countries (so-called WEIRD cultures; Henrich, Heine, & Norenzayan, 2010), and that the majority of these *are also psychology students*, the question of non-representativeness becomes even more serious.

Of course, when studying a basic cognitive process (like working memory capacity) or an aspect of social behavior that appears to be fairly universal (e.g., even

How confident can we be that the results of social psychology studies generalize to the wider population if study participants are largely of the WEIRD variety? [Image: Mike Miley, http://goo.gl/NtvlU8, CC BY-SA 2.0, http://goo.gl/eH69he]

cockroaches exhibit social facilitation!), a non-representative sample may not be a big deal. However, over time research has repeatedly demonstrated the important role that individual differences (e.g., personality traits, cognitive abilities, etc.) and culture (e.g., individualism vs. collectivism) play in shaping social behavior. For instance, even if we only consider a tiny sample of research on aggression, we know that narcissists are more likely to respond to criticism with aggression (Bushman & Baumeister, 1998); conservatives, who have a low tolerance for uncertainty, are more likely to prefer aggressive actions against those considered to be "outsiders" (de Zavala et al., 2010); countries where men hold the bulk of power in society have higher rates of physical aggression directed against female partners (Archer, 2006); and males from the southern part of the United States are more likely to react with aggression following an insult (Cohen et al., 1996).

Ethics in Social Psychological Research

For better or worse (but probably for worse), when we think about the most unethical studies in psychology, we think about social psychology. Imagine, for example, encouraging people to deliver what they believe to be a dangerous electric shock to a stranger (with bloodcurdling screams for added effect!). This is considered a "classic" study in social psychology. Or, how about having students play the role of prison guards, deliberately and sadistically abusing

other students in the role of prison inmates. Yep, social psychology too. Of course, both Stanley Milgram's (1963) experiments on obedience to authority and the Stanford prison study (Haney et al., 1973) would be considered unethical by today's standards, which have progressed with our understanding of the field. Today, we follow a series of guidelines and receive prior approval from our institutional research boards before beginning such experiments. Among the most important principles are the following:

The Stanford Prison Study has been criticized for putting participants in dangerous and psychologically damaging situations. [Image: Teodorvasic97, http://goo.gl/0LJReB, CC BY-SA 4.0, http://goo.gl/etijyD]

1. Informed consent: In general, people should know when they are involved in research, and understand what will happen to them during the study (at least in general terms that do not give away the hypothesis). They are then given the choice to participate, along with the freedom to withdraw from the study at any time. This is precisely why the Facebook emotional contagion study discussed earlier is considered ethically questionable. Still, it's important to note that certain kinds of methods —such as naturalistic observation in public spaces, or archival research based on public records—do not require obtaining informed consent.

2. Privacy: Although it is permissible to observe people's actions in public—even without them knowing—researchers cannot violate their privacy by observing them in restrooms or other private spaces without their knowledge and consent. Researchers also may not identify individual participants in their research reports (we typically report only group means and other statistics). With online data collection becoming increasingly popular, researchers also have to be mindful that they follow local data privacy laws, collect only the data that they really need (e.g., avoiding including unnecessary questions in surveys), strictly restrict access to the raw data, and have a plan in place to securely destroy the data after it is no longer needed.

3. Risks and Benefits: People who participate in psychological studies should be exposed to risk only if they fully understand the risks and only if the likely benefits clearly outweigh those risks. The Stanford prison study is a notorious example of a failure to meet this obligation. It was planned to run for two weeks but had to be shut down after only six
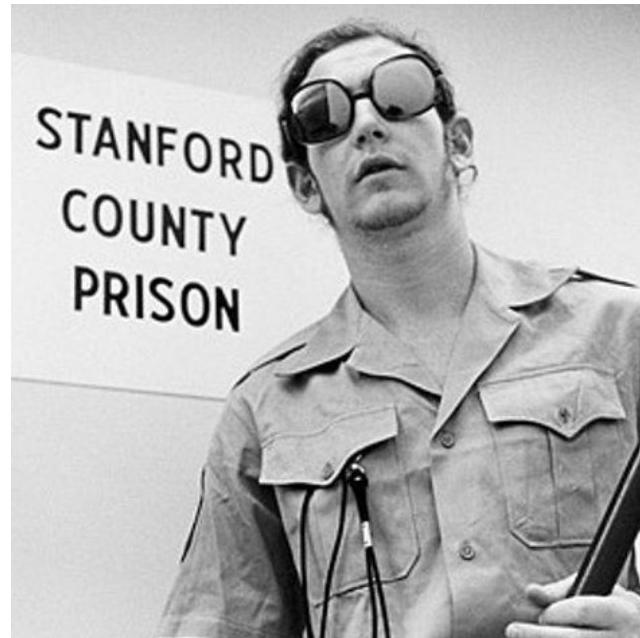
days because   of the abuse suffered by the "prison inmates." But even less extreme cases, such as researchers wishing to investigate implicit prejudice using the   IAT, need to be considerate of the consequences of providing feedback to   participants about their nonconscious biases. Similarly, any manipulations   that could potentially provoke serious emotional reactions (e.g., the   culture of honor study described above) or relatively permanent changes in   people's beliefs or behaviors (e.g., attitudes towards recycling) need to   be carefully reviewed by the IRB.

4. Deception: Social psychologists sometimes need to deceive participants (e.g., using a cover story) to avoid **demand characteristics** by hiding the true nature of the study. This is   typically done to prevent participants from modifying their behavior in   unnatural ways, especially in laboratory or field experiments. For   example, when Milgram recruited participants for his experiments on   obedience to authority, he described it as being a study of the effects of   punishment on memory! Deception is typically only permitted (a) when the   benefits of the study outweigh the risks, (b) participants are not   reasonably expected to be harmed, (c) the research question cannot be   answered without the use of deception, and (d) participants are informed   about the deception as soon as possible, usually through debriefing.

5. Debriefing: This is the process of informing research participants as soon as possible of the purpose of the study, revealing any deceptions, and correcting any   misconceptions they might have as a result of participating. Debriefing   also involves minimizing harm that might have occurred. For example, an   experiment examining the effects of sad moods on charitable behavior might   involve inducing a sad mood in participants by having them think sad   thoughts, watch a sad video, or listen to sad music. Debriefing would   therefore be the time to return participants' moods to normal by having   them think happy thoughts, watch a happy video, or listen to happy music.

Conclusion

As an immensely social species, we affect and influence each other in many ways, particularly through our interactions and cultural expectations, both conscious and nonconscious. The study of social psychology examines much of the business of our everyday lives, including our thoughts, feelings, and behaviors we are unaware or ashamed of. The desire to carefully and precisely study these topics, together with advances in technology, has led to the development of many creative techniques that allow researchers to explore the mechanics of how we relate to one another. Consider this your invitation to join the investigation.

Outside Resources

Article: Do research ethics need updating for the digital age? Questions raised by the Facebook emotional contagion study.
http://www.apa.org/monitor/2014/10/research-ethics.aspx

Article: Psychology is WEIRD. A commentary on non-representative samples in Psychology.
http://www.slate.com/articles/health_and_science/science/2013/05/weird_psychology_social_science_researchers_rely_too_much_on_western_college.html

Web: Project Implicit. Take a demonstration implicit association test
https://implicit.harvard.edu/implicit/

Web: Research Randomizer. An interactive tool for random sampling and random assignment.
https://www.randomizer.org/

Discussion Questions

1. What are some pros and cons of experimental research, field research, and archival research?

2. How would you feel if you learned that you had been a participant in a naturalistic observation study (without explicitly providing your consent)? How would you feel if you learned during a debriefing procedure that you have a stronger association between the concept of violence and members of visible minorities? Can you think of other examples of when following principles of ethical research create challenging situations?

3. Can you think of an attitude (other than those related to prejudice) that would be difficult or impossible to measure by asking people directly?

4. What do you think is the difference between a manipulation check and a dependent variable?

Vocabulary

Anecdotal evidence
An argument that is based on personal experience and not considered reliable or representative.

Archival research
A type of research in which the researcher analyses records or archives instead of collecting data from live human participants.

Basking in reflected glory
The tendency for people to associate themselves with successful people or groups.

Big data
The analysis of large data sets.

Complex experimental designs
An experiment with two or more independent variables.

Confederate
An actor working with the researcher. Most often, this individual is used to deceive unsuspecting research participants. Also known as a "stooge."

Correlational research
A type of descriptive research that involves measuring the association between two variables, or how they go together.

Cover story
A fake description of the purpose and/or procedure of a study, used when deception is necessary in order to answer a research question.

Demand characteristics
Subtle cues that make participants aware of what the experimenter expects to find or how participants are expected to behave.

Dependent variable
The variable the researcher measures but does not manipulate in an experiment.

Ecological validity
The degree to which a study finding has been obtained under conditions that are typical for what happens in everyday life.

Electronically activated recorder (EAR)
A methodology where participants wear a small, portable audio recorder that intermittently records snippets of ambient sounds around them.

Experience sampling methods
Systematic ways of having participants provide samples of their ongoing behavior. Participants' reports are dependent (contingent) upon either a signal, pre-established intervals, or the occurrence of some event.

Field experiment
An experiment that occurs outside of the lab and in a real world situation.

Hypothesis
A logical idea that can be tested.

Implicit association test (IAT)
A computer-based categorization task that measures the strength of association between specific concepts over several trials.

Independent variable
The variable the researcher manipulates and controls in an experiment.

Laboratory environments
A setting in which the researcher can carefully control situations and manipulate variables.

Manipulation check
A measure used to determine whether or not the manipulation of the independent variable has had its intended effect on the participants.

Naturalistic observation
Unobtrusively watching people as they go about the business of living their lives.

Operationalize
How researchers specifically measure a concept.

Participant variable
The individual characteristics of research subjects - age, personality, health, intelligence, etc.

Priming
The process by which exposing people to one stimulus makes certain thoughts, feelings or behaviors more salient.

Random assignment
Assigning participants to receive different conditions of an experiment by chance.

Samples of convenience
Participants that have been recruited in a manner that prioritizes convenience over representativeness.

Scientific method
A method of investigation that includes systematic observation, measurement, and experiment, and the formulation, testing, and modification of hypotheses.

Social facilitation
When performance on simple or well-rehearsed tasks is enhanced when we are in the presence of others.

Social neuroscience
An interdisciplinary field concerned with identifying the neural processes underlying social behavior and cognition.

Social or behavioral priming
A field of research that investigates how the activation of one social concept in memory can elicit changes in behavior, physiology, or self-reports of a related social concept without conscious awareness.

Survey research
A method of research that involves administering a questionnaire to respondents in person, by telephone, through the mail, or over the internet.

Terror management theory (TMT)
A theory that proposes that humans manage the anxiety that stems from the inevitability of death by embracing frameworks of meaning such as cultural values and beliefs.

WEIRD cultures

Cultures that are western, educated, industrialized, rich, and democratic.

References

Archer, J. (2006). Cross-cultural differences in physical aggression between partners: A social-role analysis. *Personality and Social Psychology Review*, 10(2), 133-153. doi: 10.1207/s15327957pspr1002_3

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype activation on action. *Journal of Personality and Social Psychology*, 71(2), 230-244. http://dx.doi.org/10.1037/0022-3514.71.2.230

Beck, E. M., & Tolnay, S. E. (1990). The killing fields of the Deep South: The market for cotton and the lynching of Blacks, 1882-1930. *American Sociological Review*, 55(4), 526-539.

Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75(1), 219-229. http://dx.doi.org/10.1037/0022-3514.75.1.219

Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology*, 34(3), 366-375. http://dx.doi.org/10.1037/0022-3514.34.3.366

Cohen, D., Nisbett, R. E., Bowdle, B. F. & Schwarz, N. (1996). Insult, aggression, and the southern culture of honor: An "experimental ethnography." *Journal of Personality and Social Psychology*, 70(5), 945-960. http://dx.doi.org/10.1037/0022-3514.70.5.945

Diener, E., & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E. M. Suh (Eds.), *Culture and subjective well-being* (pp. 185-218). Cambridge, MA: MIT Press.

Dijksterhuis, A., & van Knippenberg, A. (1998). The relation between perception and behavior, or how to win a game of trivial pursuit. *Journal of Personality and Social Psychology*, 74(4), 865-877. http://dx.doi.org/10.1037/0022-3514.74.4.865

Eichstaedt, J. C., Schwartz, H. A., Kern, M. L., Park, G., Labarthe, D. R., Merchant, R. M., & Sap, M. (2015). Psychological language on twitter predicts county-level heart disease mortality. *Psychological Science*, 26(2), 159–169. doi: 10.1177/0956797614557867

Ferguson, M. J., & Mann, T. C. (2014). Effects of evaluation: An example of robust "social" priming. *Social Cognition*, 32, 33-46. doi: 10.1521/soco.2014.32.supp.33

Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59(2), 93-104. http://dx.doi.org/10.1037/0003-066X.59.2.93

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*,

74(6), 1464-1480. http://dx.doi.org/10.1037/0022-3514.74.6.1464

Greitemeyer, T., Kastenmüller, A., & Fischer, P. (2013). Romantic motives and risk-taking: An evolutionary approach. *Journal of Risk Research*, 16, 19-38. doi: 10.1080/13669877.2012.713388

Haney, C., Banks, C., & Zimbardo, P. (1973). Interpersonal dynamics in a simulated prison. International Journal of Criminology and Penology, 1, 69-97.

Harris, C. R., Coburn, N., Rohrer, D., & Pashler, H. (2013). Two failures to replicate high-performance-goal priming effects. *PLoS ONE*, 8(8): e72467. doi:10.1371/journal.pone.0072467

Henrich, J., Heine, S., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2-3), 61-83. http://dx.doi.org/10.1017/S0140525X0999152X

Hovland, C. I., & Sears, R. R. (1940). Minor studies of aggression: VI. Correlation of lynchings with economic indices. *The Journal of Psychology*, 9(2), 301-310. doi: 10.1080/00223980.1940.9917696

Isen, A. M., & Levin, P. F. (1972). Effect of feeling good on helping: Cookies and kindness. *Journal of Personality and Social Psychology*, 21(3), 384-388. http://dx.doi.org/10.1037/h0032317

Kramer, A. D. I., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, 111(24), 8788-8790. doi: 10.1073/pnas.1320040111

Larson, R. W., Richards, M. H., & Perry-Jenkins, M. (1994). Divergent worlds: the daily emotional experience of mothers and fathers in the domestic and public spheres. *Journal of Personality and Social Psychology*, 67(6), 1034-1046.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology*, 67(4), 371–378. doi: 10.1037/h0040525

Mitra, T., Counts, S., & Pennebaker, J. W. (2016). Understanding anti-vaccination attitudes in social media. *Presentation at the Tenth International AAAI Conference on Web and Social Media*. Retrieved from http://comp.social.gatech.edu/papers/icwsm16.vaccine.mitra.pdf

Nosek, B. A., Smyth, F. L., Sriram, N., Lindner, N. M., Devos, T., Ayala, A., ... & Kesebir, S. (2009). National differences in gender–science stereotypes predict national sex differences in science and math achievement. *Proceedings of the National Academy of Sciences*, 106(26), 10593-10597. doi: 10.1073/pnas.0809921106

Paolacci, G., Chandler, J., & Ipeirotis, P. G. (2010). Running experiments on Amazon Mechanical Turk. *Judgment and Decision Making*, 51(5), 411-419.

Peterson, R. A., & Merunka, D. R. (2014). Convenience samples of college students and research reproducibility. *Journal of Business Research*, 67(5), 1035-1041. doi: 10.1016/j.jbusres.2013.08.010

Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In the wake of 9/11: The psychology of terror*. Washington, DC: American Psychological Association.

Pyszczynski, T., Wicklund, R. A., Floresku, S., Koch, H., Gauch, G., Solomon, S., & Greenberg, J. (1996). Whistling in the dark: Exaggerated consensus estimates in response to incidental reminders of mortality. *Psychological Science*, 7(6), 332-336. doi: 10.111/j.1467-9280.1996. tb00384.x

Radesky, J. S., Kistin, C. J., Zuckerman, B., Nitzberg, K., Gross, J., Kaplan-Sanoff, M., Augustyn, M., & Silverstein, M. (2014). Patterns of mobile device use by caregivers and children during meals in fast food restaurants. *Pediatrics*, 133(4), e843-849. doi: 10.1542/peds.2013-3703

Reifman, A. S., Larrick, R. P., & Fein, S. (1991). Temper and temperature on the diamond: The heat-aggression relationship in major league baseball. *Personality and Social Psychology Bulletin*, 17(5), 580-585. http://dx.doi.org/10.1177/0146167291175013

Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski. T, & Lyon, D. (1989). Evidence for terror management theory I: The effects of mortality salience on reactions to those who violate or uphold cultural values. *Journal of Personality and Social Psychology*, 57(4), 681-690. http://dx.doi.org/10.1037/0022-3514.57.4.681

Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology*, 51(3), 515-530. http://dx.doi.org/10.1037/0022-3514.51.3.515

Shanks, D. R., Newell, B. R., Lee, E. H., Balakrishnan, D., Ekelund L., Cenac Z., ... Moore, C. (2013). Priming intelligent behavior: An elusive phenomenon. *PLoS ONE*, 8(4): e56515. doi:10.1371/ journal.pone.0056515

Stavrova, O., & Ehlebracht, D. (2016). Cynical beliefs about human nature and income: Longitudinal and cross-cultural analyses. *Journal of Personality and Social Psychology*, 110 (1), 116-132. http://dx.doi.org/10.1037/pspp0000050

Stroebe, W. (2012). The truth about Triplett (1898), but nobody seems to care. *Perspectives on Psychological Science*, 7(1), 54-57. doi: 10.1177/1745691611427306

Triplett, N. (1898). The dynamogenic factors in pacemaking and competition. *American Journal of Psychology*, 9, 507-533.

Visser, P. S., Krosnick, J. A., & Lavrakas, P. (2000). Survey research. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social psychology* (pp. 223-252). New York: Cambridge University Press.

de Zavala, A. G., Cislak, A., & Wesolowska, E. (2010). Political conservatism, need for cognitive closure, and intergroup hostility. *Political Psychology*, 31(4), 521-541. doi: 10.1111/ j.1467-9221.2010.00767.x

3
Why Science?

Edward Diener

Scientific research has been one of the great drivers of progress in human history, and the dramatic changes we have seen during the past century are due primarily to scientific findings—modern medicine, electronics, automobiles and jets, birth control, and a host of other helpful inventions. Psychologists believe that scientific methods can be used in the behavioral domain to understand and improve the world. Although psychology trails the biological and physical sciences in terms of progress, we are optimistic based on discoveries to date that scientific psychology will make many important discoveries that can benefit humanity. This module outlines the characteristics of the science, and the promises it holds for understanding behavior. The ethics that guide psychological research are briefly described. It concludes with the reasons you should learn about scientific psychology

Learning Objectives

- Describe how scientific research has changed the world.
- Describe the key characteristics of the scientific approach.
- Discuss a few of the benefits, as well as problems that have been created by science.
- Describe several ways that psychological science has improved the world.
- Describe a number of the ethical guidelines that psychologists follow.

Scientific Advances and World Progress

There are many people who have made positive contributions to humanity in modern times.

Take a careful look at the names on the following list. Which of these individuals do you think has helped humanity the most?

1. Mother Teresa

2. Albert Schweitzer

3. Edward Jenner

4. Norman Borlaug

5. Fritz Haber

The usual response to this question is "Who on earth are Jenner, Borlaug, and Haber?" Many people know that Mother Teresa helped thousands of people living in the slums of Kolkata (Calcutta). Others recall that Albert Schweitzer opened his famous hospital in Africa and went on to earn the Nobel Peace Prize. The other three historical figures, on the other hand, are far less well known. Jenner, Borlaug, and Haber were scientists whose research discoveries saved millions, and even billions, of lives. Dr. Edward Jenner is often considered the "father of immunology" because he was among the first to conceive of and test vaccinations. His pioneering work led directly to the eradication of smallpox. Many other diseases have been greatly reduced because of vaccines discovered using science—measles, pertussis, diphtheria, tetanus, typhoid, cholera, polio, hepatitis—and all are the legacy of Jenner. Fritz Haber and Norman Borlaug saved more than a billion human lives. They created the "Green Revolution" by producing hybrid agricultural crops and synthetic fertilizer. Humanity can now produce food for the seven billion people on the planet, and the starvation that does occur is related to political and economic factors rather than our collective ability to produce food.
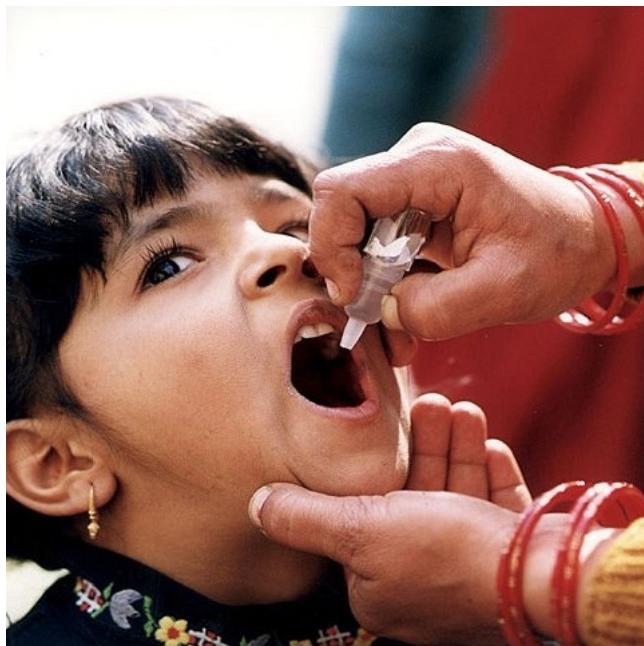
Due to the breakthrough work of Dr. Edward Jenner, millions of vaccinations are now administered around the world every year preventing the spread of many treatable diseases while saving the lives of people of all ages. [Image: CDC Global Health, https://goo.gl/hokiWz, CC BY 2.0, https://goo.gl/9uSnqN]

If you examine major social and technological changes over the past century most of them can be directly attributed to science. The world in 1914 was very different than the one we see

today (Easterbrook, 2003). There were few cars and most people traveled by foot, horseback, or carriage. There were no radios, televisions, birth control pills, artificial hearts or antibiotics. Only a small portion of the world had telephones, refrigeration or electricity. These days we find that 80% of all households have television and 84% have electricity. It is estimated that three quarters of the world's population has access to a mobile phone! Life expectancy was 47 years in 1900 and 79 years in 2010. The percentage of hungry and malnourished people in the world has dropped substantially across the globe. Even average levels of I.Q. have risen dramatically over the past century due to better nutrition and schooling.

All of these medical advances and technological innovations are the direct result of scientific research and understanding. In the modern age it is easy to grow complacent about the advances of science but make no mistake about it—science has made fantastic discoveries, and continues to do so. These discoveries have completely changed our world.

What Is Science?

What is this process we call "science," which has so dramatically changed the world? Ancient people were more likely to believe in magical and supernatural explanations for natural phenomena such as solar eclipses or thunderstorms. By contrast, scientifically minded people try to figure out the natural world through testing and observation. Specifically, science is the use of **systematic observation** in order to acquire knowledge. For example, children in a science class might combine vinegar and baking soda to observe the bubbly chemical reaction. These **empirical methods** are wonderful ways to learn about the physical and biological world. Science is not magic—it will not solve all human problems, and might not answer all our questions about behavior. Nevertheless, it appears to be the most powerful method we have for acquiring knowledge about the observable world. The essential elements of science are as follows:

1. *Systematic observation is the core of science*. Scientists observe the world, in a very organized way. We often measure the phenomenon we are observing. We record our observations so that memory biases are less likely to enter in to our conclusions. We are systematic in that we try to observe under controlled conditions, and also systematically vary the conditions of our observations so that we can see variations in the phenomena and understand when they occur and do not occur.

2. *Observation leads to hypotheses we can test*. When we develop **hypotheses** and **theories**, we state them in a way that can be tested. For example, you might make the claim that candles made of paraffin wax burn more slowly than do candles of the exact same size and shape made from bee's wax. This claim can be readily tested by timing the burning speed of

candles made from these materials.

3. *Science is democratic.* People in ancient times may have been willing to accept the views of their kings or pharaohs as absolute truth. These days, however, people are more likely to want to be able to form their own opinions and debate conclusions. Scientists are skeptical and have open discussions about their observations and theories. These debates often occur as scientists publish competing findings with the idea that the best data will win the argument.

4. *Science is cumulative.* We can learn the important truths discovered by earlier scientists and build on them. Any physics student today knows more about physics

Systematic observation is the core of science. [Image: Cvl Neuro, https://goo.gl/Avbju7, CC BY-SA 3.0, https://goo.gl/uhHola]

than Sir Isaac Newton did even though Newton was possibly the most brilliant physicist of all time. A crucial aspect of scientific progress is that after we learn of earlier advances, we can build upon them and move farther along the path of knowledge.

Psychology as a Science

Even in modern times many people are skeptical that psychology is really a science. To some degree this doubt stems from the fact that many psychological phenomena such as depression, intelligence, and prejudice do not seem to be directly observable in the same way that we can observe the changes in ocean tides or the speed of light. Because thoughts and feelings are invisible many early psychological researchers chose to focus on behavior. You might have noticed that some people act in a friendly and outgoing way while others appear to be shy and withdrawn. If you have made these types of observations then you are acting just like early psychologists who used behavior to draw inferences about various types of personality. By using behavioral measures and rating scales it is possible to measure thoughts and feelings. This is similar to how other researchers explore "invisible" phenomena such as the way that educators measure academic performance or economists measure quality of life.

One important pioneering researcher was Francis Galton, a cousin of Charles Darwin who lived in England during the late 1800s. Galton used patches of color to test people's ability to distinguish between them. He also invented the self-report questionnaire, in which people

offered their own expressed judgments or opinions on various matters. Galton was able to use self-reports to examine—among other things—people's differing ability to accurately judge distances.

In 1875 Francis Galton did pioneering studies of twins to determine how much the similarities and differences in twins were affected by their life experiences. In the course of this work he coined the phrase "Nature versus Nurture". [Image: XT Inc., https://goo.gl/F1Wvu7, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Although he lacked a modern understanding of genetics Galton also had the idea that scientists could look at the behaviors of identical and fraternal twins to estimate the degree to which genetic and social factors contribute to personality; a puzzling issue we currently refer to as the "nature-nurture question."

In modern times psychology has become more sophisticated. Researchers now use better measures, more sophisticated study designs and better statistical analyses to explore human nature. Simply take the example of studying the emotion of happiness. How would you go about studying happiness? One straight-forward method is to simply ask people about their happiness and to have them use a numbered scale to indicate their feelings. There are, of course, several problems with this. People might lie about their happiness, might not be able to accurately report on their own happiness, or might not use the numerical scale in the same way. With these limitations in mind modern psychologists employ a wide range of methods to assess happiness. They use, for instance, "peer report measures" in which they ask close friends and family members about the happiness of a target individual. Researchers can then compare these ratings to the self-report ratings and check for discrepancies. Researchers also use memory measures, with the idea that dispositionally positive people have an easier time recalling pleasant events and negative people have an easier time recalling unpleasant events. Modern psychologists even use biological measures such as saliva cortisol samples (cortisol is a stress related hormone) or fMRI images of brain activation (the left pre-frontal cortex is one area of brain activity associated with good moods).

Despite our various methodological advances it is true that psychology is still a very young science. While physics and chemistry are hundreds of years old psychology is barely a hundred

and fifty years old and most of our major findings have occurred only in the last 60 years. There are legitimate limits to psychological science but it is a science nonetheless.

Psychological Science is Useful

Psychological science is useful for creating interventions that help people live better lives. A growing body of research is concerned with determining which therapies are the most and least effective for the treatment of psychological disorders.

For example, many studies have shown that cognitive behavioral therapy can help many people suffering from depression and anxiety disorders (Butler, Chapman, Forman, & Beck, 2006; Hoffman & Smits, 2008). In contrast, research reveals that some types of therapies actually might be harmful on average (Lilienfeld, 2007).

In organizational psychology, a number of psychological interventions have been found by researchers to produce greater productivity and satisfaction in the workplace (e.g., Guzzo, Jette, & Katzell, 1985). Human factor engineers have greatly increased the safety and utility of the products we use. For example, the human factors psychologist Alphonse Chapanis and other researchers redesigned the cockpit controls of aircraft to make them less confusing and easier to respond to, and this led to a decrease in pilot errors and crashes.

Cognitive Behavioral Therapy has shown to be effective in treating a variety of conditions, including depression. [Image: SalFalco, https://goo.gl/3knLoJ, CC BY-NC 2.0, https://goo.gl/HEXbAA]

Forensic sciences have made courtroom decisions more valid. We all know of the famous cases of imprisoned persons who have been exonerated because of DNA evidence. Equally dramatic cases hinge on psychological findings. For instance, psychologist Elizabeth Loftus has conducted research demonstrating the limits and unreliability of eyewitness testimony and memory. Thus, psychological findings are having practical importance in the world outside the laboratory. Psychological science has experienced enough success to demonstrate that it works, but there remains a huge amount yet to be learned.

Ethics of Scientific Psychology

Psychology differs somewhat from the natural sciences such as chemistry in that researchers conduct studies with human research participants. Because of this there is a natural tendency to want to guard research participants against potential psychological harm. For example, it might be interesting to see how people handle ridicule but it might not be advisable to ridicule research participants.

Scientific psychologists follow a specific set of guidelines for research known as a code of **ethics**. There are extensive ethical guidelines for how human participants should be treated in psychological research (Diener & Crandall, 1978; Sales & Folkman, 2000). Following are a few highlights:

Diagram of the Milgram Experiment in which the "teacher" (T) was asked to deliver a (supposedly) painful electric shock to the "learner"(L). Would this experiment be approved by a review board today? [Image: Fred the Oyster, https://goo.gl/ZIbQz1, CC BY-SA 4.0, https://goo.gl/X3i0tq]

1. *Informed consent*. In general, people should know when they are involved in research, and understand what will happen to them during the study. They should then be given a free choice as to whether to participate.

2. *Confidentiality*. Information that researchers learn about individual participants should not be made public without the consent of the individual.

3. *Privacy*. Researchers should not make observations of people in private places such as their bedrooms without their knowledge and consent. Researchers should not seek confidential information from others, such as school authorities, without consent of the participant or his or her guardian.

4. *Benefits*. Researchers should consider the benefits of their proposed research and weigh these against potential risks to the participants. People who participate in psychological studies should be exposed to risk only if they fully understand these risks and only if the likely benefits clearly outweigh the risks.

5. *Deception*. Some researchers need to deceive participants in order to hide the true nature of the study. This is typically done to prevent participants from modifying their behavior
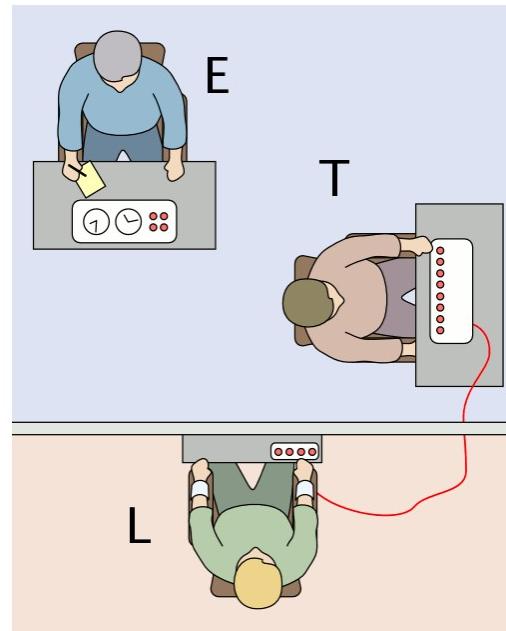
in unnatural ways. Researchers are required to "debrief" their participants after they have completed the study. Debriefing is an opportunity to educate participants about the true nature of the study.

Why Learn About Scientific Psychology?

I once had a psychology professor who asked my class why we were taking a psychology course. Our responses give the range of reasons that people want to learn about psychology:

1. To understand ourselves

2. To understand other people and groups

3. To be better able to influence others, for example, in socializing children or motivating employees

4. To learn how to better help others and improve the world, for example, by doing effective psychotherapy

5. To learn a skill that will lead to a profession such as being a social worker or a professor

6. To learn how to evaluate the research claims you hear or read about

7. Because it is interesting, challenging, and fun! People want to learn about psychology because this is exciting in itself, regardless of other positive outcomes it might have. Why do we see movies? Because they are fun and exciting, and we need no other reason. Thus, one good reason to study psychology is that it can be rewarding in itself.

Conclusions

The science of psychology is an exciting adventure. Whether you will become a scientific psychologist, an applied psychologist, or an educated person who knows about psychological research, this field can influence your life and provide fun, rewards, and understanding. My hope is that you learn a lot from the modules in this e-text, and also that you enjoy the experience! I love learning about psychology and neuroscience, and hope you will too!

Outside Resources

Web: Science Heroes- A celebration of people who have made lifesaving discoveries.
http://www.scienceheroes.com/index.php?option=com_content&view=article&id=258&Itemid=27

Discussion Questions

1. Some claim that science has done more harm than good. What do you think?

2. Humanity is faced with many challenges and problems. Which of these are due to human behavior, and which are external to human actions?

3. If you were a research psychologist, what phenomena or behaviors would most interest you?

4. Will psychological scientists be able to help with the current challenges humanity faces, such as global warming, war, inequality, and mental illness?

5. What can science study and what is outside the realm of science? What questions are impossible for scientists to study?

6. Some claim that science will replace religion by providing sound knowledge instead of myths to explain the world. They claim that science is a much more reliable source of solutions to problems such as disease than is religion. What do you think? Will science replace religion, and should it?

7. Are there human behaviors that should not be studied? Are some things so sacred or dangerous that we should not study them?

Vocabulary

Empirical methods
Approaches to inquiry that are tied to actual measurement and observation.

Ethics
Professional guidelines that offer researchers a template for making decisions that protect research participants from potential harm and that help steer scientists away from conflicts of interest or other situations that might compromise the integrity of their research.

Hypotheses
A logical idea that can be tested.

Systematic observation
The careful observation of the natural world with the aim of better understanding it. Observations provide the basic data that allow scientists to track, tally, or otherwise organize information about the natural world.

Theories
Groups of closely related phenomena or observations.

References

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review, 26*, 17–31.

Diener, E., & Crandall, R. (1978). *Ethics in social and behavioral research.* Chicago, IL: University of Chicago Press.

Easterbrook, G. (2003). *The progress paradox*. New York, NY: Random House.

Guzzo, R. A., Jette, R. D., & Katzell, R. A. (1985). The effects of psychologically based intervention programs on worker productivity: A meta-analysis. *Personnel Psychology, 38*, 275.291.

Hoffman, S. G., & Smits, J. A. J. (2008). Cognitive-behavioral therapy for adult anxiety disorders. *Journal of Clinical Psychiatry, 69*, 621–32.

Lilienfeld, S. O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science, 2*, 53–70.

Moore, D. (2003). Public lukewarm on animal rights. Gallup News Service, May 21. http://www.gallup.com/poll/8461/public-lukewarm-animal-rights.aspx

Sales, B. D., & Folkman, S. (Eds.). (2000). *Ethics in research with human participants.* Washington, DC: American Psychological Association.

The Self

4
Self and Identity

Dan P. McAdams

For human beings, the self is what happens when "I" encounters "Me." The central psychological question of selfhood, then, is this: How does a person apprehend and understand who he or she is? Over the past 100 years, psychologists have approached the study of self (and the related concept of identity) in many different ways, but three central metaphors for the self repeatedly emerge. First, the self may be seen as a social actor, who enacts roles and displays traits by performing behaviors in the presence of others. Second, the self is a motivated agent, who acts upon inner desires and formulates goals, values, and plans to guide behavior in the future. Third, the self eventually becomes an autobiographical author, too, who takes stock of life — past, present, and future — to create a story about who I am, how I came to be, and where my life may be going. This module briefly reviews central ideas and research findings on the self as an actor, an agent, and an author, with an emphasis on how these features of selfhood develop over the human life course.

Learning Objectives

- Explain the basic idea of reflexivity in human selfhood—how the "I" encounters and makes sense of itself (the "Me").

- Describe fundamental distinctions between three different perspectives on the self: the self as actor, agent, and author.

- Describe how a sense of self as a social actor emerges around the age of 2 years and how it develops going forward.

- Describe the development of the self's sense of motivated agency from the emergence of the child's theory of mind to the articulation of life goals and values in adolescence and beyond.

- Define the term narrative identity, and explain what psychological and cultural functions

narrative identity serves.

Introduction

In the Temple of Apollo at Delphi, the ancient Greeks inscribed the words: "Know thy*self*." For at least 2,500 years, and probably longer, human beings have pondered the meaning of the ancient aphorism. Over the past century, psychological scientists have joined the effort. They have formulated many theories and tested countless hypotheses that speak to the central question of human selfhood: *How does a person know who he or she is?*

We work on ourselves as we would any other interesting project. And when we do we generally focus on three psychological categories - The Social Actor, The Motivated Agent, and The Autobiographical Author. [Image: MakuKulden, https://goo.gl/sMUsnJ, CC BY-NC 2.0, https://goo.gl/VnKlK8]

The ancient Greeks seemed to realize that the self is inherently **reflexive**—it reflects back on itself. In the disarmingly simple idea made famous by the great psychologist William James (1892/1963), the self is what happens when "I" reflects back upon "Me." The self is both the I and the Me—it is the knower, and it is what the knower knows when the knower reflects upon itself. When you look back at yourself, what do you see? When you look inside, what do you find? Moreover, when you try to *change* your self in some way, what is it that you are trying to change? The philosopher Charles Taylor (1989) describes the self as a reflexive *project*. In modern life, Taylor agues, we often try to manage, discipline, refine, improve, or develop the self. We *work on* our selves, as we might work on any other interesting project. But what exactly is it that we work on?

Imagine for a moment that you have decided to improve your*self*. You might, say, go on a diet to improve your appearance. Or you might decide to be nicer to your mother, in order to improve that important social role. Or maybe the problem is at work—you need to find a

better job or go back to school to prepare for a different career. Perhaps you just need to work harder. Or get organized. Or recommit yourself to religion. Or maybe the key is to begin thinking about your whole life story in a completely different way, in a way that you hope will bring you more happiness, fulfillment, peace, or excitement.

Although there are many different ways you might reflect upon and try to improve the self, it turns out that many, if not most, of them fall roughly into three broad psychological categories (McAdams & Cox, 2010). The I may encounter the Me as (a) a social actor, (b) a motivated agent, or (c) an autobiographical author.

The Social Actor

Shakespeare tapped into a deep truth about human nature when he famously wrote, "All the world's a stage, and all the men and women merely players." He was wrong about the "merely," however, for there is nothing more important for human adaptation than the manner in which we perform our roles as actors in the everyday theatre of social life. What Shakespeare may have sensed but could not have fully understood is that human beings evolved to live in social groups. Beginning with Darwin (1872/1965) and running through contemporary conceptions of human evolution, scientists have portrayed human nature as profoundly *social* (Wilson, 2012). For a few million years, *Homo sapiens* and their evolutionary forerunners have survived and flourished

In some ways people are just like actors on stage. We play roles and follow scripts every day. [Image: Brian, https://goo.gl/z0Vl3t, CC BY-SA 2.0, https://goo.gl/i4GXf5]

by virtue of their ability to live and work together in complex social groups, cooperating with each other to solve problems and overcome threats and competing with each other in the face of limited resources. As social animals, human beings strive to *get along* and *get ahead* in the presence of each other (Hogan, 1982). Evolution has prepared us to care deeply about social acceptance and social status, for those unfortunate individuals who do not get along well in social groups or who fail to attain a requisite status among their peers have typically been severely compromised when it comes to survival and reproduction. It makes

consummate evolutionary sense, therefore, that the human "I" should apprehend the "Me" first and foremost as a *social actor*.

For human beings, the sense of the self as a social actor begins to emerge around the age of 18 months. Numerous studies have shown that by the time they reach their second birthday most toddlers recognize themselves in mirrors and other reflecting devices (Lewis & Brooks-Gunn, 1979; Rochat, 2003). What they see is an embodied actor who moves through space and time. Many children begin to use words such as "me" and "mine" in the second year of life, suggesting that the I now has linguistic labels that can be applied reflexively to itself: I call myself "me." Around the same time, children also begin to express social emotions such as embarrassment, shame, guilt, and pride (Tangney, Stuewig, & Mashek, 2007). These emotions tell the social actor how well he or she is performing in the group. When I do things that win the approval of others, I feel proud of myself. When I fail in the presence of others, I may feel embarrassment or shame. When I violate a social rule, I may experience guilt, which may motivate me to make amends.

Many of the classic psychological theories of human selfhood point to the second year of life as a key developmental period. For example, Freud (1923/1961) and his followers in the psychoanalytic tradition traced the emergence of an autonomous **ego** back to the second year. Freud used the term "ego" (in German *das Ich*, which also translates into "the I") to refer to an executive self in the personality. Erikson (1963) argued that experiences of trust and interpersonal attachment in the first year of life help to consolidate the autonomy of the ego in the second. Coming from a more sociological perspective, Mead (1934) suggested that the I comes to know the Me through reflection, which may begin quite literally with mirrors but later involves the reflected appraisals of others. I come to know who I am as a social actor, Mead argued, by noting how *other people* in my social world react to my performances. In the development of the self as a social actor, other people function like mirrors—they reflect who I am back to me.

Research has shown that when young children begin to make attributions about themselves, they start simple (Harter, 2006). At age 4, Jessica knows that she has dark hair, knows that she lives in a white house, and describes herself to others in terms of simple behavioral *traits*. She may say that she is "nice," or "helpful," or that she is "a good girl most of the time." By the time, she hits fifth grade (age 10), Jessica sees herself in more complex ways, attributing traits to the self such as "honest," "moody," "outgoing," "shy," "hard-working," "smart," "good at math but not gym class," or "nice except when I am around my annoying brother." By late childhood and early adolescence, the personality traits that people attribute to themselves, as well as those attributed to them by others, tend to correlate with each other in ways that conform to a well-established taxonomy of five broad trait domains, repeatedly derived in studies of

adult personality and often called the Big Five: (1) extraversion, (2) neuroticism, (3) agreeableness, (4) conscientiousness, and (5) openness to experience (Roberts, Wood, & Caspi, 2008). By late childhood, moreover, self-conceptions will likely also include important social *roles*: "I am a good student," "I am the oldest daughter," or "I am a good friend to Sarah."

Traits and roles, and variations on these notions, are the main currency of the self as social actor (McAdams & Cox, 2010). Trait terms capture perceived consistencies in social performance. They convey what I reflexively perceive to be my overall acting style, based in part on how I think others see me as an actor in many different social situations. Roles capture the quality, as I perceive it, of important structured relationships in my life. Taken together, traits and roles make up the main features of my social reputation, as I apprehend it in my own mind (Hogan, 1982).

If you have ever tried hard to change yourself, you may have taken aim at your social reputation, targeting your central traits or your social roles. Maybe you woke up one day and decided that you must become a more optimistic and emotionally upbeat person. Taking into consideration the reflected appraisals of others, you realized that even your friends seem to avoid you because you bring them down. In addition, it feels bad to feel so bad all the time: Wouldn't it be better to feel good, to have more energy and hope? In the language of traits, you have decided to "work on" your "neuroticism." Or maybe instead, your problem is the trait of "conscientiousness": You are undisciplined and don't work hard enough, so you resolve to make changes in that area. Self-improvement efforts such as these—aimed at changing one's traits to become a more effective social actor—are sometimes successful, but they are very hard—kind of like dieting. Research suggests that broad traits tend to be stubborn, resistant to change, even with the aid of psychotherapy. However, people often have more success working directly on their social roles. To become a more effective social actor, you may want to take aim at the important roles you play in life. What can I do to become a better son or daughter? How can I find new and meaningful roles to perform at work, or in my family, or among my friends, or in my church and community? By doing concrete things that enrich your performances in important social roles, you may begin to see yourself in a new light, and others will notice the change, too. Social actors hold the potential to transform their performances across the human life course. Each time you walk out on stage, you have a chance to start anew.

The Motivated Agent

Whether we are talking literally about the theatrical stage or more figuratively, as I do in this module, about the everyday social environment for human behavior, observers can never

When we observe others we only see how they act but are never able to access the entirety of their internal experience. [Iamge: CC0 Public Domain, https://goo.gl/m25gce]

fully know what is in the actor's head, no matter how closely they watch. We can see actors act, but we cannot know for sure what they *want* or what they *value*, unless they tell us straightaway. As a social actor, a person may come across as friendly and compassionate, or cynical and mean-spirited, but in neither case can we infer their motivations from their traits or their roles. What does the friendly person want? What is the cynical father trying to achieve? Many broad psychological theories of the self prioritize the motivational qualities of human behavior—the inner needs, wants, desires, goals, values, plans, programs, fears, and aversions that seem to give behavior its direction and purpose (Bandura, 1989; Deci & Ryan, 1991; Markus & Nurius, 1986). These kinds of theories explicitly conceive of the self as a *motivated agent.*

To be an agent is to act with direction and purpose, to move forward into the future in pursuit of self-chosen and valued goals. In a sense, human beings are agents even as infants, for babies can surely act in goal-directed ways. By age 1 year, moreover, infants show a strong preference for observing and imitating the goal-directed, intentional behavior of others, rather than random behaviors (Woodward, 2009). Still, it is one thing to act in goal-directed ways; it is quite another for the I to know itself (the Me) as an intentional and purposeful force who moves forward in life in pursuit of self-chosen goals, values, and other desired end states. In order to do so, the person must first realize that people indeed have desires and goals in their minds and that these inner desires and goals *motivate* (initiate, energize, put into motion) their behavior. According to a strong line of research in developmental psychology, attaining this kind of understanding means acquiring a **theory of mind** (Wellman, 1993), which occurs for most children by the age of 4. Once a child understands that other people's behavior is often motivated by inner desires and goals, it is a small step to apprehend the self in similar terms.

Building on theory of mind and other cognitive and social developments, children begin to construct the self as a motivated agent in the elementary school years, layered over their still-developing sense of themselves as social actors. Theory and research on what developmental psychologists call **the age 5-to-7 shift** converge to suggest that children become more planful,

intentional, and systematic in their pursuit of valued goals during this time (Sameroff & Haith, 1996). Schooling reinforces the shift in that teachers and curricula place increasing demands on students to work hard, adhere to schedules, focus on goals, and achieve success in particular, well-defined task domains. Their relative success in achieving their most cherished goals, furthermore, goes a long way in determining children's **self-esteem** (Robins, Tracy, & Trzesniewski, 2008). Motivated agents feel good about themselves to the extent they believe that they are making good progress in achieving their goals and advancing their most important values.

Goals and values become even more important for the self in adolescence, as teenagers begin to confront what Erikson (1963) famously termed the developmental challenge of **identity**. For adolescents and young adults, establishing a psychologically efficacious identity involves exploring different options with respect to life goals, values, vocations, and intimate relationships and eventually committing to a motivational and ideological agenda for adult life—an integrated and realistic sense of what I want and value in life and how I plan to achieve it (Kroger & Marcia, 2011). Committing oneself to an integrated suite of life goals and values is perhaps the greatest achievement for the **self as motivated agent**. Establishing an adult identity has implications, as well, for how a person moves through life as a social actor, entailing new role commitments and, perhaps, a changing understanding of one's basic dispositional traits. According to Erikson, however, identity achievement is always provisional, for adults continue to work on their identities as they move into midlife and beyond, often relinquishing old goals in favor of new ones, investing themselves in new projects and making new plans, exploring new relationships, and shifting their priorities in response to changing life circumstances (Freund & Riediger, 2006; Josselson, 1996).

There is a sense whereby *any* time you try to change yourself, you are assuming the role of a motivated agent. After all, to strive to change something is inherently what an agent does. However, what particular feature of selfhood you try to change may correspond to your self as actor, agent, or author, or some combination. When you try to change your traits or roles, you take aim at the social actor. By contrast, when you try to change your values or life goals, you are focusing on yourself as a motivated agent. Adolescence and young adulthood are periods in the human life course when many of us focus attention on our values and life goals. Perhaps you grew up as a traditional Catholic, but now in college you believe that the values inculcated in your childhood no longer function so well for you. You no longer believe in the central tenets of the Catholic Church, say, and are now working to replace your old values with new ones. Or maybe you still want to be Catholic, but you feel that your new take on faith requires a different kind of personal ideology. In the realm of the motivated agent, moreover, changing values can influence life goals. If your new value system prioritizes alleviating the suffering of others, you may decide to pursue a degree in social work, or to

become a public interest lawyer, or to live a simpler life that prioritizes people over material wealth. A great deal of the identity work we do in adolescence and young adulthood is about values and goals, as we strive to articulate a personal vision or dream for what we hope to accomplish in the future.

The Autobiographical Author

Even as the "I" continues to develop a sense of the "Me" as both a social actor and a motivated agent, a third standpoint for selfhood gradually emerges in the adolescent and early-adult years. The third perspective is a response to Erikson's (1963) challenge of identity. According to Erikson, developing an identity involves more than the exploration of and commitment to life goals and values (the self as motivated agent), and more than committing to new roles and re-evaluating old traits (the self as social actor). It also involves achieving a sense of *temporal continuity* in life—a reflexive understanding of *how I have come to be the person I am becoming*, or put differently, how my past self has developed into my present self, and how my present self will, in turn, develop into an envisioned future self. In his analysis of identity formation in the life of the 15th-century Protestant reformer Martin Luther, Erikson (1958) describes the culmination of a young adult's search for identity in this way:

"To be adult means among other things to see one's own life in continuous perspective, both in retrospect and prospect. By accepting some definition of who he is, usually on the basis of a function in an economy, a place in the sequence of generations, and a status in the structure of society, the adult is able *to selectively reconstruct his past in such a way that, step for step, it seems to have planned him, or better, he seems to have planned it*. In this sense, psychologically we do choose our parents, our family history, and the history of our kings, heroes, and gods. By making them our own, we maneuver ourselves into the inner position of proprietors, of creators."

-- (Erikson, 1958, pp. 111–112; emphasis added).

In this rich passage, Erikson intimates that the development of a mature identity in young adulthood involves the I's ability to construct a retrospective and prospective *story* about the Me (McAdams, 1985). In their efforts to find a meaningful identity for life, young men and women begin "to selectively reconstruct" their past, as Erikson wrote, and imagine their future to create an integrative life story, or what psychologists today often call a narrative identity. A narrative identity is an internalized and evolving story of the self that reconstructs the past and anticipates the future in such a way as to provide a person's life with some degree of unity, meaning, and purpose over time (McAdams, 2008; McLean, Pasupathi, & Pals, 2007).

The self typically becomes an *autobiographical author* in the early-adult years, a way of being that is layered over the motivated agent, which is layered over the social actor. In order to provide life with the sense of temporal continuity and deep meaning that Erikson believed identity should confer, we must author a personalized life story that integrates our understanding of who we once were, who we are today, and who we may become in the future. The story helps to explain, for the author and for the author's world, why the social actor does what it does and why the motivated agent wants what it wants, and how the person as a whole has developed over time, from the past's reconstructed beginning to the future's imagined ending.

By the time they are 5 or 6 years of age, children can tell well-formed stories about personal events in their lives (Fivush, 2011). By the end of childhood, they usually have a good sense of what a typical biography contains and how it is sequenced, from birth to death (Thomsen & Bernsten, 2008). But it is not until adolescence, research shows, that human beings express advanced storytelling skills and what psychologists call **autobiographical reasoning** (Habermas & Bluck, 2000; McLean & Fournier, 2008). In autobiographical reasoning, a narrator is able to derive substantive conclusions about the self from analyzing his or her own personal experiences. Adolescents may develop the ability to string together events into causal chains and inductively derive general themes about life from a sequence of chapters and scenes (Habermas & de Silveira, 2008). For example, a 16-year-old may be able to explain to herself

Young people often "try on" many variations of identities to see which best fits their private sense of themselves. [Image: Sangudo, https://goo.gl/Ay3UMR, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

and to others how childhood experiences in her family have shaped her vocation in life. Her parents were divorced when she was 5 years old, the teenager recalls, and this caused a great deal of stress in her family. Her mother often seemed anxious and depressed, but she (the now-teenager when she was a little girl—the story's protagonist) often tried to cheer her mother up, and her efforts seemed to work. In more recent years, the teenager notes that her friends often come to her with their boyfriend problems. She seems to be very adept at giving advice about love and relationships, which stems, the teenager now believes, from her early experiences with her mother. Carrying this causal narrative forward, the teenager now thinks that she would like to be a marriage

counselor when she grows up.

Unlike children, then, adolescents can tell a full and convincing story about an entire human life, or at least a prominent line of causation within a full life, explaining continuity and change in the story's protagonist over time. Once the cognitive skills are in place, young people seek interpersonal opportunities to share and refine their developing sense of themselves as storytellers (the I) who tell stories about themselves (the Me). Adolescents and young adults author a narrative sense of the self by telling stories about their experiences to other people, monitoring the feedback they receive from the tellings, editing their stories in light of the feedback, gaining new experiences and telling stories about those, and on and on, as selves create stories that, in turn, create new selves (McLean et al., 2007). Gradually, in fits and starts, through conversation and introspection, the I develops a convincing and coherent narrative about the Me.

Contemporary research on the **self as autobiographical author** emphasizes the strong effect of *culture* on narrative identity (Hammack, 2008). Culture provides a menu of favored plot lines, themes, and character types for the construction of self-defining life stories. Autobiographical authors sample selectively from the cultural menu, appropriating ideas that seem to resonate well with their own life experiences. As such, life stories reflect the culture, wherein they are situated as much as they reflect the authorial efforts of the autobiographical I.

As one example of the tight link between culture and narrative identity, McAdams (2013) and others (e.g., Kleinfeld, 2012) have highlighted the prominence of **redemptive narratives** in American culture. Epitomized in such iconic cultural ideals as the American dream, Horatio Alger stories, and narratives of Christian atonement, redemptive stories track the move from suffering to an enhanced status or state, while scripting the development of a chosen protagonist who journeys forth into a dangerous and unredeemed world (McAdams, 2013). Hollywood movies often celebrate redemptive quests. Americans are exposed to similar narrative messages in self-help books, 12-step programs, Sunday sermons, and in the rhetoric of political campaigns. Over the past two decades, the world's most influential spokesperson for the power of redemption in human lives may be Oprah Winfrey, who tells her own story of overcoming childhood adversity while encouraging others, through her media outlets and philanthropy, to tell similar kinds of stories for their own lives (McAdams, 2013). Research has demonstrated that American adults who enjoy high levels of mental health and civic engagement tend to construct their lives as narratives of redemption, tracking the move from sin to salvation, rags to riches, oppression to liberation, or sickness/abuse to health/recovery (McAdams, Diamond, de St. Aubin, & Mansfield, 1997; McAdams, Reynolds, Lewis, Patten, & Bowman, 2001; Walker & Frimer, 2007). In American society, these kinds of stories are often

seen to be inspirational.

At the same time, McAdams (2011, 2013) has pointed to shortcomings and limitations in the redemptive stories that many Americans tell, which mirror cultural biases and stereotypes in American culture and heritage. McAdams has argued that redemptive stories support happiness and societal engagement for some Americans, but the same stories can encourage moral righteousness and a naïve expectation that suffering will always be redeemed. For better and sometimes for worse, Americans seem to love stories of personal redemption and often aim to assimilate their autobiographical memories and aspirations to a redemptive form. Nonetheless, these same stories may not work so well in cultures that espouse different values and narrative ideals (Hammack, 2008). It is important to remember that every culture offers its own storehouse of favored narrative forms. It is also essential to know that no single narrative form captures all that is good (or bad) about a culture. In American society, the redemptive narrative is but one of many different kinds of stories that people commonly employ to make sense of their lives.

What is your story? What kind of a narrative are you working on? As you look to the past and imagine the future, what threads of continuity, change, and meaning do you discern? For many people, the most dramatic and fulfilling efforts to change the self happen when the I works hard, as an autobiographical author, to construct and, ultimately, to tell a new story about the Me. Storytelling may be the most powerful form of self-transformation that human beings have ever invented. Changing one's life story is at the heart of many forms of psychotherapy and counseling, as well as religious conversions, vocational epiphanies, and other dramatic transformations of the self that people often celebrate as turning points in their lives (Adler, 2012). Storytelling is often at the heart of the little changes, too, minor edits in the self that we make as we move through daily life, as we live and experience life, and as we later tell it to ourselves and to others.

Conclusion

For human beings, selves begin as social actors, but they eventually become motivated agents and autobiographical authors, too. The I first sees itself as an embodied actor in social space; with development, however, it comes to appreciate itself also as a forward-looking source of self-determined goals and values, and later yet, as a storyteller of personal experience, oriented to the reconstructed past and the imagined future. To "know thyself" in mature adulthood, then, is to do three things: (a) to apprehend and to perform with social approval my self-ascribed traits and roles, (b) to pursue with vigor and (ideally) success my most valued goals and plans, and (c) to construct a story about life that conveys, with vividness and cultural

resonance, how I became the person I am becoming, integrating my past as I remember it, my present as I am experiencing it, and my future as I hope it to be.

Outside Resources

Web: The website for the Foley Center for the Study of Lives, at Northwestern University. The site contains research materials, interview protocols, and coding manuals for conducting studies of narrative identity.
http://www.sesp.northwestern.edu/foley/

Discussion Questions

1. Back in the 1950s, Erik Erikson argued that many adolescents and young adults experience a tumultuous identity crisis. Do you think this is true today? What might an identity crisis look and feel like? And, how might it be resolved?

2. Many people believe that they have a true self buried inside of them. From this perspective, the development of self is about discovering a psychological truth deep inside. Do you believe this to be true? How does thinking about the self as an actor, agent, and author bear on this question?

3. Psychological research shows that when people are placed in front of mirrors they often behave in a more moral and conscientious manner, even though they sometimes experience this procedure as unpleasant. From the standpoint of the self as a social actor, how might we explain this phenomenon?

4. By the time they reach adulthood, does everybody have a narrative identity? Do some people simply never develop a story for their life?

5. What happens when the three perspectives on self—the self as actor, agent, and author—conflict with each other? Is it necessary for people's self-ascribed traits and roles to line up well with their goals and their stories?

6. William James wrote that the self includes all things that the person considers to be "mine." If we take James literally, a person's self might extend to include his or her material possessions, pets, and friends and family. Does this make sense?

7. To what extent can we control the self? Are some features of selfhood easier to control than others?

8. What cultural differences may be observed in the construction of the self? How might gender, ethnicity, and class impact the development of the self as actor, as agent, and as author?

Vocabulary

Autobiographical reasoning
The ability, typically developed in adolescence, to derive substantive conclusions about the self from analyzing one's own personal experiences.

Big Five
A broad taxonomy of personality trait domains repeatedly derived from studies of trait ratings in adulthood and encompassing the categories of (1) extraversion vs. introversion, (2) neuroticism vs. emotional stability, (3) agreeable vs. disagreeableness, (4) conscientiousness vs. nonconscientiousness, and (5) openness to experience vs. conventionality. By late childhood and early adolescence, people's self-attributions of personality traits, as well as the trait attributions made about them by others, show patterns of intercorrelations that confirm with the five-factor structure obtained in studies of adults.

Ego
Sigmund Freud's conception of an executive self in the personality. Akin to this module's notion of "the I," Freud imagined the ego as observing outside reality, engaging in rational though, and coping with the competing demands of inner desires and moral standards.

Identity
Sometimes used synonymously with the term "self," identity means many different things in psychological science and in other fields (e.g., sociology). In this module, I adopt Erik Erikson's conception of identity as a developmental task for late adolescence and young adulthood. Forming an identity in adolescence and young adulthood involves exploring alternative roles, values, goals, and relationships and eventually committing to a realistic agenda for life that productively situates a person in the adult world of work and love. In addition, identity formation entails commitments to new social roles and reevaluation of old traits, and importantly, it brings with it a sense of temporal continuity in life, achieved though the construction of an integrative life story.

Narrative identity
An internalized and evolving story of the self designed to provide life with some measure of temporal unity and purpose. Beginning in late adolescence, people craft self-defining stories that reconstruct the past and imagine the future to explain how the person came to be the person that he or she is becoming.

Redemptive narratives

Life stories that affirm the transformation from suffering to an enhanced status or state. In American culture, redemptive life stories are highly prized as models for the good self, as in classic narratives of atonement, upward mobility, liberation, and recovery.

Reflexivity
The idea that the self reflects back upon itself; that the I (the knower, the subject) encounters the Me (the known, the object). Reflexivity is a fundamental property of human selfhood.

Self as autobiographical author
The sense of the self as a storyteller who reconstructs the past and imagines the future in order to articulate an integrative narrative that provides life with some measure of temporal continuity and purpose.

Self as motivated agent
The sense of the self as an intentional force that strives to achieve goals, plans, values, projects, and the like.

Self as social actor
The sense of the self as an embodied actor whose social performances may be construed in terms of more or less consistent self-ascribed traits and social roles.

Self-esteem
The extent to which a person feels that he or she is worthy and good. The success or failure that the motivated agent experiences in pursuit of valued goals is a strong determinant of self-esteem.

Social reputation
The traits and social roles that others attribute to an actor. Actors also have their own conceptions of what they imagine their respective social reputations indeed are in the eyes of others.

The Age 5-to-7 Shift
Cognitive and social changes that occur in the early elementary school years that result in the child's developing a more purposeful, planful, and goal-directed approach to life, setting the stage for the emergence of the self as a motivated agent.

The "I"
The self as knower, the sense of the self as a subject who encounters (knows, works on) itself (the Me).

The "Me"
The self as known, the sense of the self as the object or target of the I's knowledge and work.

Theory of mind
Emerging around the age of 4, the child's understanding that other people have minds in which are located desires and beliefs, and that desires and beliefs, thereby, motivate behavior.

References

Adler, J. M. (2012). Living into the story: Agency and coherence in a longitudinal study of narrative identity development and mental health over the course of psychotherapy. *Journal of Personality and Social Psychology, 102*, 367–389.

Bandura, A. (1989). Human agency in social-cognitive theory. *American Psychologist, 44*, 1175–1184.

Darwin, C. (1872/1965). *The expression of emotions in man and animals*. Chicago, IL: University of Chicago Press.

Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier & R. M. Ryan (Eds.), *Nebraska symposium on motivation* (Vol. 38, pp. 237–288). Lincoln, NE: University of Nebraska Press.

Erikson, E. H. (1963). *Childhood and society* (2nd ed.). New York, NY: Norton.

Erikson, E. H. (1958). *Young man Luther*. New York, NY: Norton.

Fivush, R. (2011). The development of autobiographical memory. In S. T. Fiske, D. L. Schacter, & S. E. Taylor (Eds.), *Annual review of psychology* (Vol. 62, pp. 559–582). Palo Alto, CA: Annual Reviews, Inc.

Freud, S. (1923/1961). The ego and the id. In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 19). London, UK: Hogarth.

Freund, A. M., & Riediger, M. (2006). Goals as building blocks of personality and development in adulthood. In D. K. Mroczek & T. D. Little (Eds.), *Handbook of personality development* (pp. 353–372). Mahwah, NJ: Erlbaum.

Habermas, T., & Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychological Bulletin, 126*, 748–769.

Habermas, T., & de Silveira, C. (2008). The development of global coherence in life narrative across adolescence: Temporal, causal, and thematic aspects. *Developmental Psychology, 44*, 707–721.

Hammack, P. L. (2008). Narrative and the cultural psychology of identity. *Personality and Social Psychology Review, 12*, 222–247.

Harter, S. (2006). The self. In N. Eisenberg (Ed.) & W. Damon & R. M. Lerner (Series Eds.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development* (pp. 505–570). New York, NY: Wiley.

Hogan, R. (1982). A socioanalytic theory of personality. In M. Paige (Ed.), *Nebraska symposium on motivation* (Vol. 29, pp. 55–89). Lincoln, NE: University of Nebraska Press.

James, W. (1892/1963). Psychology. Greenwich, CT: Fawcett.

Josselson, R. (1996). *Revising herself: The story of women's identity from college to midlife*. New York, NY: Oxford University Press.

Kleinfeld, J. (2012). *The frontier romance: Environment, culture, and Alaska identity*. Fairbanks, AK: University of Alaska Press.

Kroger, J., & Marcia, J. E. (2011). The identity statuses: Origins, meanings, and interpretations. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 31–53). New York, NY: Springer.

Lewis, M., & Brooks-Gunn, J. (1979). *Social cognition and the acquisition of self*. New York, NY: Plenum.

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*, 954–969.

McAdams, D. P. (2013). *The redemptive self: Stories Americans live by (revised and expanded edition)*. New York, NY: Oxford University Press.

McAdams, D. P. (2011). *George W. Bush and the redemptive dream: A psychological portrait*. New York, NY: Oxford University Press.

McAdams, D. P. (2008). Personal narratives and the life story. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 242–262). New York, NY: Guilford Press.

McAdams, D. P. (1985). *Power, intimacy, and the life story: Personological inquiries into identity*. New York, NY: Guilford Press.

McAdams, D. P., & Cox, K. S. (2010). Self and identity across the life span. In M. E. Lamb & A. M. Freund (Eds.), *The handbook of life-span development: Vol. 2. Social and emotional development* (pp. 158–207). New York, NY: Wiley.

McAdams, D. P., Diamond, A., de St. Aubin, E., & Mansfield, E. D. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology, 72*, 678–694.

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative, and their relation to psychosocial adaptation in midlife adults and in students. *Personality and Social Psychology Bulletin, 27*, 472–483.

McLean, K. C., & Fournier, M. A. (2008). The content and process of autobiographical reasoning in narrative identity. *Journal of Research in Personality, 42*, 527–545.

McLean, K. C., Pasupathi, M., & Pals, J. L. (2007). Selves creating stories creating selves: A process model of self-development. *Personality and Social Psychology Review, 11*, 262–278.

Mead, G. H. (1934). *Mind, self, and society*. Chicago, IL: University of Chicago Press.

Roberts, B. W., Wood, D., & Caspi, A. (2008). The development of personality traits in adulthood. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 375–398). New York, NY: Guilford Press.

Robins, R. W., Tracy, J. L., & Trzesniewski, K. H. (2008). Naturalizing the self. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 421–447). New York, NY: Guilford Press.

Rochat, P. (2003). Five levels of self-awareness as they unfold early in life. *Consciousness and Cognition, 12*, 717–731.

Sameroff, A. J., & Haith, M. M. (Eds.), (1996). *The five to seven year shift*. Chicago, IL: University of Chicago Press.

Tangney, J. P., Stuewig, J., & Mashek, D. J. (2007). Moral emotions and moral behavior. In S. Fiske and D. Schacter (Eds.), *Annual review of psychology* (Vol. 58, pp. 345–372). Palo Alto, CA: Annual Reviews, Inc.

Taylor, C. (1989). *Sources of the self: The making of the modern identity*. Cambridge, MA: Harvard University Press.

Thomsen, D. K., & Bernsten, D. (2008). The cultural life script and life story chapters contribute to the reminiscence bump. *Memory, 16*, 420–435.

Walker, L. J., & Frimer, J. A. (2007). Moral personality of brave and caring exemplars. *Journal of Personality and Social Psychology, 93*, 845–860.

Wellman, H. M. (1993). Early understanding of mind: The normal case. In S. Baron-Cohen, H. Tager-Flusberg, & D. J. Cohen (Eds.), *Understanding other minds: Perspectives from autism* (pp. 10–39). New York, NY: Oxford University Press.

Wilson, E. O. (2012). *The social conquest of earth*. New York, NY: Liveright.

Woodward, A. (2009). Infants' grasp of others' intentions. *Current Directions in Psychological Science, 18*, 53–57.

Social Cognition

5
Prejudice, Discrimination, and Stereotyping

Susan T. Fiske

People are often biased against others outside of their own social group, showing prejudice (emotional bias), stereotypes (cognitive bias), and discrimination (behavioral bias). Biases can explicit (overt and conscious) or more implicit (automatic, ambiguous, and ambivalent). In the 21st century, however, with social group categories even more complex, biases may be transforming.

Learning Objectives

- Distinguish prejudice, stereotypes, and discrimination.

- Distinguish blatant biases from subtle biases.

- Understand biases such as social dominance orientation and right-wing authoritarianism.

- Understand subtle, unexamined biases that are automatic, ambiguous, and ambivalent.

- Understand 21st century biases that may break down as identities get more complicated.

Introduction

We commonly say that we "should not label" others but we cannot help but do so. We categorize people according to their citizenship, gender, allegiance to a sports team, and university affiliation, among other qualities. Although categorizing can be useful, it can also result in serious and negative consequences when labels are associated with a person or group's worth. This module focuses on biases against individuals based on group membership and against groups.

You are an individual, full of beliefs, identities, and more that help make you unique. You don't want to be labeled just by your gender or race or religion. But as complex as we perceive ourselves to be, we often define others merely by their most distinct social group. [Image: caseorganic, https://goo.gl/PuLI4E, CC BY-NC 2.0, https://goo.gl/VnKlK8]

From Category to Combative

People naturally create mental categories. We group household objects together as "furniture," certain domestic animals as "pets," and certain books as "classics." Categories are helpful because they provide a mental roadmap for how to interact in novel situations. For example, a person might not have ever been to a Hindu wedding, but their experience of "weddings" as a general category can help them know what to expect and how to behave. Weddings are generally happy occasions (it is more appropriate to say "congratulations" than "I am so sorry"), they are formal affairs (people typically dress up), and they usually include food (you don't need to stop and eat before attending the wedding).

Categories get more complicated when we apply them to humans. We naturally categorize people by age, language, occupation, ethnicity, income, and many other qualities. In the abstract these mental maps can help us understand how to interact with new people based on educated guesses about their category. Unfortunately, problems can also arise from our tendency to categorize.

First, there is the problem of stereotyping. **Stereotypes** are biased thoughts about a person due to the incorrect belief that the category accurately describes them. For instance, Margaret might not be "typical" (or stereotypical) of an 80-year-old in that she regularly competes in organized half-marathons. She goes against the common idea of older adults as being weak or unhealthy.

Next, categorization can also lead to prejudice. Like stereotypes, **prejudice** is a bias against people based on their group membership. Where stereotypes are related to thinking, prejudices are more emotional in nature. If people hold a negative view of Margaret because they hold negative views about older adults in general, this is prejudice.

Finally, the tendency to categorize can be associated with discrimination. **Discrimination** is a behavior bias against a person (or group) based on stereotyped beliefs about that group. If people do not want to invite Margaret on vacation because they fear that she will move too slowly (a common view of older people) then they are discriminating against her.

Historical Biases

Today, many nations have equality clearly articulated in their constitutions. Iceland, for example, guarantees legal equality between men and women. Similarly, Ecuador guarantees the fundamental right to sexual orientation and gender identity. Unfortunately, even when some countries have created legal protections, they thought that "equality" applied to only select groups. For instance, the constitution of the United States attempted to ensure that all people were represented by the government and could participate in the creation of government. At the time it was written, however, women and minorities (especially enslaved people) were not included in this sentiment. How is it that entire groups of people were left out of political participation, justice, and freedom?

One explanation is that historical biases were widespread and institutionalized. It was considered acceptable to openly disparage entire groups of people and to pass laws that restricted or harmed these groups. Just 80 years ago, American college students unabashedly thought Turkish people were "cruel, very religious, and treacherous" (Katz & Braly, 1933). These types of stereotypes were overt, unapologetic, and expected to be shared by others—what we now call "blatant biases." They were generalizations about a group, since most of the college students did not interact with people from Turkey.

Blatant biases (also called "explicit biases") are conscious beliefs, feelings, and behavior that people are perfectly willing to admit, which express hostility toward other groups (outgroups)

while unduly favoring one's own group (in-group). Classic examples of blatant bias include the views of members of hate groups such as the Ku Klux Klan and members of Hitler's Nazi party.

Blatant bias is not a thing of the past, however. People have always and still do openly dehumanize outgroup members and harbor hostile attitudes toward them. That said, the targets of bias sometimes shift across time. In the United States, for instance, waves of new immigrants such as Chinese people, Irish people, and Italians, were met with open hostility, with attitudes often shifting to the most recent group of immigrants. More recently, during the COVID-19 pandemic, some people held hostile views of Asian-Americans, who they perceived as being associated with the coronavirus (Misra, Le, Goldmann & Yang, 2020).

These blatant biases tend to run in packs: People who openly hate one outgroup also hate many others. To illustrate this pattern, we turn to two ideologies related to bias.

What are Biased People Thinking?

Social Dominance Orientation

People with a social dominance orientation are more likely to be attracted to certain types of careers, such as law enforcement, that maintain group hierarchies. [Image: Thomas Hawk, https://goo.gl/qWQ7jE, CC BY-NC 2.0, https://goo.gl/VnKlK8]

Social dominance orientation (SDO) describes a belief that group hierarchies are inevitable in all societies and are even a good idea to maintain order and stability (Sidanius & Pratto, 1999). People who score high on SDO believe that some groups are inherently better than others, and because of this, there is no such thing as group "equality." At the same time, though, SDO is not just about being personally dominant and controlling of others; SDO describes a preferred arrangement of groups with some on top (preferably one's own group) and some on the bottom. For example, someone high in SDO would likely be upset if someone from an outgroup moved into her neighborhood. It's not that the person high in SDO wants to "control" what this outgroup member does; it's that moving

into this "nice neighborhood" disrupts the social hierarchy the person high in SDO believes in (i.e. living in a nice neighborhood denotes one's place in the social hierarchy—a place reserved for one's in-group members).

Although research has shown that people higher in SDO are more likely to be politically conservative, there are other traits that more strongly predict one's SDO. For example, researchers have found that those who score higher on SDO are usually lower than average on tolerance, empathy, altruism, and community orientation. In general, those high in SDO have a strong belief in work ethic—that hard work always pays off and leisure is a waste of time. People higher on SDO tend to choose and thrive in occupations that maintain existing group hierarchies (police, prosecutors, business), compared to those lower in SDO, who tend to pick more equalizing occupations (social work, public defense, psychology).

The point is that SDO—a preference for inequality as normal and natural—also predicts endorsing the superiority of certain groups: men, native-born residents, heterosexuals, and believers in the dominant religion. This means seeing women, minorities, homosexuals, and non-believers as inferior. Understandably, people from the first list of groups tends to score higher on SDO, while those from the second group tend to score lower. For example, the SDO gender difference (men higher, women lower) appears all over the world. At its heart, SDO rests on a fundamental belief that the world is tough and competitive with only a limited number of resources. Thus, those high in SDO see groups as battling each other for these resources, with winners at the top of the social hierarchy and losers at the bottom (see Table 1).

	Social Dominance Orientation	Right-Wing Authoritarianism
Core Belief	Groups compete for economic resources	Groups compete over values
Intergroup Belief	Group hierarchies are inevitable, good	Groups must follow authority
Ingroup Belief	Ingroup must be tough, competitive	Ingroup must unite, protect
Outgroup Belief	"They" are trying to beat "us"	"They" have bad values

Table 1. Biases

Right-wing Authoritarianism

Right-wing authoritarianism (RWA) is an ideology that emphasizes conformity or obedience to authority (Altemeyer, 1988). Whereas SDO emphasizes potential economic conflicts, RWA focuses on value conflicts. Returning to an example from earlier, the homeowner high in SDO may dislike the outgroup member moving into her neighborhood because it "threatens" one's economic resources (e.g. lowering the value of one's house; fewer openings in the school; etc.). By contrast, those high in RWA may equally dislike the outgroup member moving into the neighborhood but for different reasons. Here, it is because this outgroup member brings in values or beliefs that the person high in RWA disagrees with, thus "threatening" the collective values of his or her group. RWA respects group unity over individual preferences, wanting to maintain group values in the face of differing opinions. Calls for national unity and patriotism that do not tolerate dissenting voices are an example.

Despite its name, though, RWA is not necessarily limited to people on the right (conservatives). Like SDO, there does appear to be an association between this ideology (i.e. the preference for order, clarity, and conventional values) and conservative beliefs. However, regardless of political ideology, RWA focuses on competing frameworks of values. This means, potentially, that there is left-wing authoritarianism that promotes conventional progressive values and seeks to silence dissenting voices (Manson, 2020). Notably, the combination of high RWA and high SDO predicts joining hate groups that openly endorse aggression against minority groups, immigrants, homosexuals, and believers in non-dominant religions (Altemeyer, 2004).

Implicit Biases

Today, there is a greater appreciation of the fact that not all biases are overt hostility based on a personal animosity toward members of a group. Subtle biases (also called "automatic" or "implicit" biases) are unexamined and sometimes unconscious, but just as real in their consequences. They are automatic, ambiguous, and ambivalent, but nonetheless biased, unfair, and disrespectful to a belief in equality.

Automatic Biases

Most people have a positive view of themselves. They believe they have good values, rational thoughts, and strengths. Most people also identify as members of certain groups but not others. They are Canadian, or fans of Manchester United, or are doctors. Logic suggests, then, that because we like ourselves, we also like the groups in which we are members. We might feel affinity toward people from our home town, a connection with those who attend our university, or commiserate with the experience of people who share our gender identity, religion, or ethnicity. Liking yourself and the groups to which you belong is natural. The larger
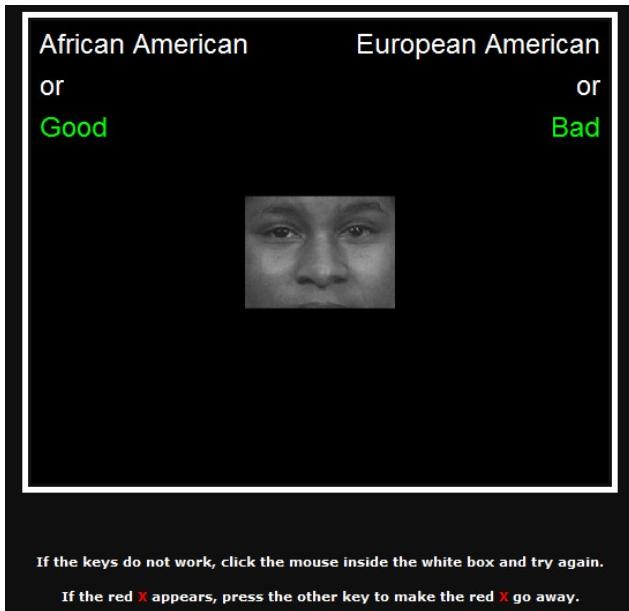
An actual screenshot from an IAT (Implicit Association Test) that is designed to test a person's reaction time (measured in milliseconds) to an array of stimuli that are presented on the screen. This particular item is testing an individual's unconscious reaction towards members of various ethnic groups. [Image: Courtesy of Anthony Greenwald from Project Implicit]

issue, however, is that own-group preference often results in liking other groups less. And whether you recognize this "favoritism" as wrong, this trade-off is relatively automatic (unintended, immediate, and irresistible).

Social psychologists have developed several ways to measure this automatic preference, the most famous being the Implicit Association Test (IAT; Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002; Greenwald, McGhee, & Schwartz, 1998). The test itself is rather simple (and you can experience it yourself here). The IAT measures how quickly you can sort words or pictures into different categories. For example, if you were asked to categorize "ice cream" as good or bad, you might quickly categorize it as good.

However, imagine if every time you ate ice cream, you got a brain freeze. When it comes time to categorize ice cream as good or bad, you may still categorize it as "good," but you will likely be a little slower—perhaps even fractions of a second slower-- in arriving at this judgment. This is how the IAT works: measuring tiny differences in the time it takes you to make judgments.

This is an especially useful way to measure potential biases because it does not simply ask people to openly report on the extent to which they discriminate against others. Instead, it measures how quickly people make judgments about the goodness or badness of various groups. The IAT is sensitive to very slight hesitations that result from having automatic or unconscious biases. People are generally faster at pairing their own group with "good" categories. In fact, this finding generally holds regardless of whether one's group is measured according race, age, religion, nationality, and even temporary, insignificant memberships.

It might be easy to dismiss the IAT findings of the all-too-human tendency toward faster, more favorable processing of one's own group. It turns out, however, that people's reaction time on the IAT predicts actual feelings about out-group members, decisions about them, and behavior toward them, especially nonverbal behavior (Greenwald, Poehlman, Uhlmann, & Banaji, 2009).

Type of Bias	Example	What It Shows
Automatic	Implicit Association Test	People link "good" & ingroup, "bad" & outgroup
Ambiguous	Social identity theory Self-categorized theory Aversive racism	People favor ingroup, distance from outgroup Same but emphasizes self as a member of ingroup People avoid outgroup, avoid their own prejudices
Ambivalent	Stereotype Content Model	People divide groups by warmth and competence

Table 2: Subtle Biases

For example, a job interviewer might have two qualified applicants; a man and a woman. Although the interviewer may not be "blatantly biased," their "automatic or implicit biases" may be harmful to one of the applicants. For example, the interviewer might hold a negative view of women and, without even realizing it, act distant and withdrawn while interviewing the female candidate. This sends subtle cues to the applicant that she is not being taken seriously, is not a good fit for the job, or is not likely to get hired. These small interactions can have devastating effects on the hopeful interviewee's ability to perform well (Word, Zanna, & Cooper, 1974).

Although this is unfair, sometimes the automatic associations—often driven by society's stereotypes—trump our own explicit values (Devine, 1989). Sadly, this can result in consequential discrimination, such as allocating fewer resources to disliked outgroups (Rudman & Ashmore, 2009).

Ambiguous Biases

The results from research using the IAT are consistent with social identity theory. Social identity theory (Tajfel, Billig, Bundy, & Flament, 1971) describes this tendency to favor one's own in-group over another's outgroup. As a result, outgroup disliking stems from this in-group liking (Brewer & Brown, 1998). For example, if two classes of

Whether we are aware of it or not (and usually we're not), we sort the world into "us" and "them" categories. We are more likely to treat with bias or discrimination anyone we feel is outside our own group. [Image: Keira McPhee, https://goo.gl/gkaKBe, CC BY 2.0, https://goo.gl/BRvSA7]

children want to play on the same soccer field, the classes will come to dislike each other not because of any real, objectionable traits about the other group. The dislike originates from each class's favoritism toward itself and the fact that only one group can play on the soccer field at a time. With this preferential perspective for one's own group, people are not punishing the other one so much as neglecting it in favor of their own. In our soccer example, one set of children will focus on their own desire to play without really regarding the similar desire of the other class as equal and legitimate. However, to justify preferential treatment, people often exaggerate the differences between their in-group and an outgroup. Specifically, people see members of an outgroup as more similar to one another in personality than they actually are. The result is seeing people who live in subsidized housing, or who like comic books, or who are religious, or who have autism as one homogenous group with little variation.

Spontaneously, people categorize people into groups just as we categorize furniture or food into one type or another. The difference is that we categories ourselves, as **self-categorization theory** points out (Turner, 1975). Because the attributes of group categories can be either good or bad, we tend to favor the groups with people like us and incidentally disfavor the others. In-group favoritism is an ambiguous form of bias because it disfavors the outgroup by exclusion. For example, authoritarian leaders tend to allocate more national resources to members of their own tribe, religious sect, or political party.

A specific case of comfort with the ingroup is called **aversive racism**, so-called because people do not like to admit their own racial biases to themselves or others (Dovidio & Gaertner, 2010). Tensions between, say, a White person's own good intentions, on the one hand, and discomfort with closely interacting with a Black person, on the other hand, may cause the White person to behave stiffly or be distracted. As a result, the White person may give a good excuse to avoid such awkward situations. Such a reaction will be ambiguous to both parties and difficult to interpret. Was the White person right to avoid the situation so that neither person would feel uncomfortable? Was the White person wrong because they will never learn to be comfortable if they avoid contact? Indicators of aversive racism correlate with discriminatory behavior, despite being the ambiguous result of good intentions gone bad.

Ambivalent Biases

Not all stereotypes of outgroups are all bad. For example, ethnic Asians living in the United States are commonly referred to as the **model minority** because of their perceived success in areas such as education, income, and social stability. Another example includes people who feel benevolent toward traditional women but hostile toward nontraditional women. Or even ageist people who feel fond of older adults but, at the same time, view them as incompetent

to support themselves and worry about the burden they place on public welfare programs. A simple way to understand these mixed feelings, across a variety of groups, results from the **Stereotype Content Model** shows that social groups are viewed according to their perceived warmth and competence. (Fiske, Cuddy, & Glick, 2007).

The stereotype content model attends to two major dimensions of evaluating other people: warmth and competence. First, people are interested in understanding the intentions of others. Like the guard at night saying: "Who goes there, friend or foe?" If the other group has good, cooperative intentions, we view them as "warm" and often consider them part of "our side." However, if the other group is "cold," we often view them as a threat and treat them accordingly. We also want to know whether the members of the group are competent enough to act on their good or ill intentions. These two simple dimensions—warmth and competence—together map how groups relate to each other in society.
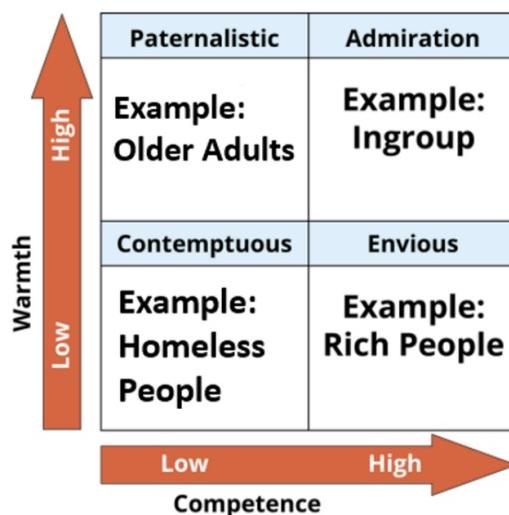
Figure 1: Stereotype Content Model - 4 kinds of stereotypes that form from perceptions of competence and warmth

Common stereotypes of people from all sorts of categories and occupations turn out to classify them along these two dimensions (see Figure 1). For example, the ingroup in most societies is the average citizen, seen as warm and competent. At another end of the spectrum are homeless people and drug addicts, stereotyped as not having good intentions (perhaps untrustworthy) and likewise being incompetent (unable) to do anything useful. Some group stereotypes are mixed, high on one dimension and low on the other. For example, rich people are often viewed as competent but cold. And a stereotypical "old person" would be seen as high in warmth but lower in competence. This is not to suggest that actual older people are

not competent, of course, but that they are not widely admired for their accumulated wisdom.

A group's position on the dimensions of warmth and competence dictate whether we relate to its members with admiration, dehumanizing contempt, competitive envy, or paternalistic caretaking. These four kinds of stereotypes and their associated emotional prejudices (see Figure 2) occur all over the world and apply to each society's own groups. These maps of the group terrain predict specific types of discrimination for specific kinds of groups.
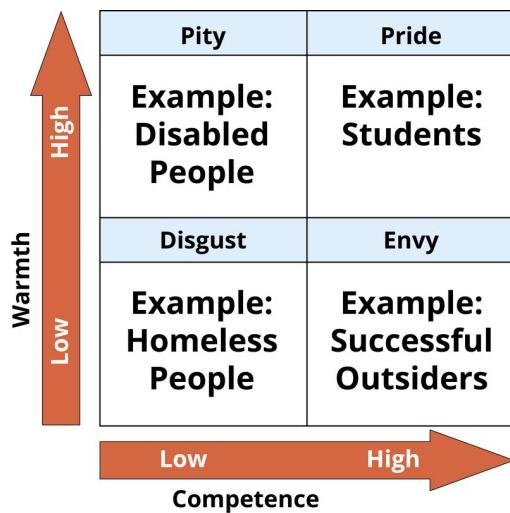
Figure 2: Combinations of perceived warmth and competence and the associated behaviors/ emotional prejudices.

Conclusion: Today's Prejudices

As the world becomes more interconnected—more collaborations between countries, more intermarrying between different groups—more and more people are encountering greater diversity of others in everyday life. Just ask yourself if you've ever been asked, "What are you?" This question is frequently asked to people about their ethnicity, national origin, gender identity, religion, and other group affiliations. Such a question would be preposterous if you were only surrounded by members of your own group. Categories, then, are becoming more and more uncertain, unclear, volatile, and complex (Bodenhausen & Peery, 2009). People's identities are multifaceted, intersecting across gender, race, class, age, region, and more. Identities are not so simple, but maybe as the 21st century unfurls, we will recognize each other by the content of our individual character instead of against the backdrop of stereotypes.

Outside Resources

Web: Website exploring the causes and consequences of prejudice.
http://www.understandingprejudice.org/

Web: Website that provides helpful information about prejudice including definition and statistics. This content is provided by OnlinePsychology@Pepperdine, the Online Master of Psychology program from Pepperdine University.
https://onlinepsych.pepperdine.edu/blog/prejudice-discrimination-coping-skills/

Discussion Questions

1. Do you know more people from different kinds of social groups than your parents did?

2. How often do you hear people criticizing groups without knowing anything about them?

3. Take the IAT. Could you feel that some associations are easier than others?

4. What groups illustrate ambivalent biases, seemingly competent but cold, or warm but incompetent?

5. Do you or   someone you know believe that group hierarchies are inevitable? Desirable?

6. How can people learn to get along with people who seem different from them?

Vocabulary

Automatic
Automatic biases are unintended, immediate, and irresistible.

Aversive racism
Aversive racism is unexamined racial bias that the person does not intend and would reject, but that avoids inter-racial contact.

Blatant biases
Blatant biases are conscious beliefs, feelings, and behavior that people are perfectly willing to admit, are mostly hostile, and openly favor their own group.

Discrimination
Discrimination is behavior that advantages or disadvantages people merely based on their group membership.

Implicit Association Test
Implicit Association Test (IAT) measures relatively automatic biases that favor own group relative to other groups.

Model minority
A minority group whose members are perceived as achieving a higher degree of socioeconomic success than the population average.

Prejudice
Prejudice is an evaluation or emotion toward people merely based on their group membership.

Right-wing authoritarianism
Right-wing authoritarianism (RWA) focuses on value conflicts but endorses respect for obedience and authority in the service of group conformity.

Self-categorization theory
Self-categorization theory develops social identity theory's point that people categorize themselves, along with each other into groups, favoring their own group.

Social dominance orientation

Social dominance orientation (SDO) describes a belief that group hierarchies are inevitable in all societies and even good, to maintain order and stability.

Social identity theory
Social identity theory notes that people categorize each other into groups, favoring their own group.

Stereotype Content Model
Stereotype Content Model shows that social groups are viewed according to their perceived warmth and competence.

Stereotypes
Stereotype is a belief that characterizes people based merely on their group membership.

Subtle biases
Subtle biases are automatic, ambiguous, and ambivalent, but real in their consequences.

References

Altemeyer, B. (2004). Highly dominating, highly authoritarian personalities. *The Journal of Social Psychology, 144*(4), 421-447. doi:10.3200/SOCP.144.4.421-448

Altemeyer, B. (1988). *Enemies of freedom: Understanding right-wing authoritarianism.* San Francisco: Jossey-Bass.

Bodenhausen, G. V., & Peery, D. (2009). Social categorization and stereotyping in vivo: The VUCA challenge. *Social and Personality Psychology Compass, 3*(2), 133-151. doi:10.1111/j.1751-9004.2009.00167.x

Brewer, M. B., & Brown, R. J. (1998). Intergroup relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology, Vols. 1 and 2* (4th ed.) (pp. 554-594). New York: McGraw-Hill.

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*(1), 5-18. doi:10.1037/0022-3514.56.1.5

Dovidio, J. F., & Gaertner, S. L. (2010). Intergroup bias. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of Social Psychology, Vol. 2* (5th ed.) (pp. 1084-1121). Hoboken, NJ: John Wiley.

Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences, 11*(2), 77-83. doi:10.1016/j.tics.2006.11.005

Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review, 109*(1), 3-25. doi:10.1037/0033-295X.109.1.3

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*(6), 1464-1480. doi:10.1037/0022-3514.74.6.1464

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*(1), 17-41. doi:10.1037/a0015575

Katz, D., & Braly, K. (1933). Racial stereotypes of one hundred college students. *The Journal of Abnormal and Social Psychology, 28*(3), 280-290. doi:10.1037/h0074049

Manson, J. H. (2020). Right-wing authoritarianism, left-wing authoritarianism, and pandemic-mitigation authoritarianism. *Personality and Individual Differences, 167*, 1-6. doi: 10.1016/j.paid.2020.110251

Misra, S., Le, P.T., Goldmann, E. & Yang, L.H. (2020). Psychological impact of anti-Asian stigma due to COVID-19 pandemic: A call for research, practice, and policy responses. *Psychological*

Trauma: Theory, research, practice, and policy, 12(5), 461-464. doi:10.1037/tra0000821

Rudman, L. A., & Ashmore, R. D. (2007). Discrimination and the implicit association test. *Group Processes & Intergroup Relations, 10*(3), 359-372. doi:10.1177/1368430207078696

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression.* New York: Cambridge University Press.

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology, 1*(2), 149-178. doi:10.1002/ejsp.2420010202

Turner, J. C. (1975). Social comparison and social identity: Some prospects for intergroup behaviour. *European Journal of Social Psychology, 5*(1), 5-34. doi:10.1002/ejsp.2420050102

Word, C. O., Zanna, M. P., & Cooper, J. (1974). The nonverbal mediation of self-fulfilling prophecies in interracial interaction. *Journal of Experimental Social Psychology, 10*(2), 109-120. doi:10.1016/0022-1031(74)90059-6

6
Conformity and Obedience

Jerry M. Burger

We often change our attitudes and behaviors to match the attitudes and behaviors of the people around us. One reason for this conformity is a concern about what other people think of us. This process was demonstrated in a classic study in which college students deliberately gave wrong answers to a simple visual judgment task rather than go against the group. Another reason we conform to the norm is because other people often have information we do not, and relying on norms can be a reasonable strategy when we are uncertain about how we are supposed to act. Unfortunately, we frequently misperceive how the typical person acts, which can contribute to problems such as the excessive binge drinking often seen in college students. Obeying orders from an authority figure can sometimes lead to disturbing behavior. This danger was illustrated in a famous study in which participants were instructed to administer painful electric shocks to another person in what they believed to be a learning experiment. Despite vehement protests from the person receiving the shocks, most participants continued the procedure when instructed to do so by the experimenter. The findings raise questions about the power of blind obedience in deplorable situations such as atrocities and genocide. They also raise concerns about the ethical treatment of participants in psychology experiments.

Learning Objectives

- Become aware of how widespread conformity is in our lives and some of the ways each of us changes our attitudes and behavior to match the norm.

- Understand the two primary reasons why people often conform to perceived norms.

- Appreciate how obedience to authority has been examined in laboratory studies and some of the implications of the findings from these investigations.

- Consider some of the remaining issues and sources of controversy surrounding Milgram's

obedience studies.

Introduction

When he was a teenager, my son often enjoyed looking at photographs of me and my wife taken when we were in high school. He laughed at the hairstyles, the clothing, and the kind of glasses people wore "back then." And when he was through with his ridiculing, we would point out that no one is immune to fashions and fads and that someday his children will probably be equally amused by his high school photographs and the trends he found so normal at the time.

Everyday observation confirms that we often adopt the actions and attitudes of the people around us. Trends in clothing, music, foods, and entertainment are obvious. But our views on political issues, religious questions, and lifestyles also reflect to some degree the attitudes of the people we interact with. Similarly, decisions about behaviors such as smoking and drinking are influenced by whether the people we spend time with engage in these activities. Psychologists refer to this widespread tendency to act and think like the people around us as **conformity**.

Fashion trends serve as good, and sometimes embarrassing, examples of our own susceptibility to conformity. [Image: bianca francesca, https://goo. gl/0roq35, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Conformity

What causes all this conformity? To start, humans may possess an inherent tendency to imitate the actions of others. Although we usually are not aware of it, we often mimic the gestures, body posture, language, talking speed, and many other behaviors of the people we interact with. Researchers find that this mimicking increases the connection between people and allows our interactions to flow more smoothly (Chartrand & Bargh, 1999).

Beyond this automatic tendency to imitate others, psychologists have identified two primary reasons for conformity. The first of these is **normative influence**. When normative influence is operating, people go along with the crowd because they are concerned about what others think of them. We don't want to look out of step or become the target of criticism just because we like different kinds of music or dress differently than everyone else. Fitting in also brings rewards such as camaraderie and compliments.

How powerful is normative influence? Consider a classic study conducted many years ago by Solomon Asch (1956). The participants were male college students who were asked to engage in a seemingly simple task. An experimenter standing several feet away held up a card that depicted one line on the left side and three lines on the right side. The participant's job was to say aloud which of the three lines on the right was the same length as the line on the left. Sixteen cards were presented one at a time, and the correct answer on each was so obvious as to make the task a little boring. Except for one thing. The participant was not alone. In fact, there were six other people in the room who also gave their answers to the line-judgment task aloud. Moreover, although they pretended to be fellow participants, these other individuals were, in fact, confederates working with the experimenter. The real participant was seated so that he always gave his answer after hearing what five other "participants" said. Everything went smoothly until the third trial, when inexplicably the first "participant" gave an obviously incorrect answer. The mistake might have been amusing, except the second participant gave the same answer. As did the third, the fourth, and the fifth participant. Suddenly the real participant was in a difficult situation. His eyes told him one thing, but five out of five people apparently saw something else.

It's one thing to wear your hair a certain way or like certain foods because everyone around you does. But, would participants intentionally give a wrong answer just to conform with the other participants? The confederates uniformly gave incorrect answers on 12 of the 16 trials, and 76 percent of the participants went along with the norm at least once and also gave the wrong answer. In total, they conformed with the group on one-third of the 12 test trials. Although we might be impressed that the majority of the time participants answered honestly,
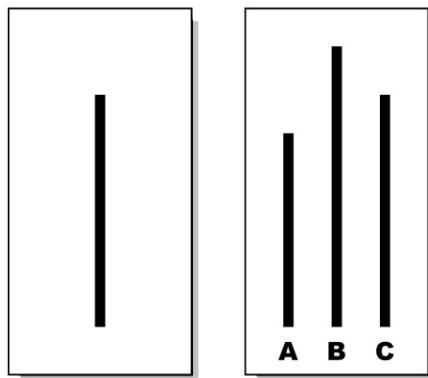
Examples of the cards used in the Asch experiment. How powerful is the normative influence? Would you be tempted to give a clearly incorrect answer, like many participants in the Asch experiment did, to better match the thoughts of a group of peers? [Image: Fred the Oyster, https://goo.gl/Gi5mtu, CC BY-SA 4.0, https://goo.gl/zVGXn8]

most psychologists find it remarkable that so many college students caved in to the pressure of the group rather than do the job they had volunteered to do. In almost all cases, the participants knew they were giving an incorrect answer, but their concern for what these other people might be thinking about them overpowered their desire to do the right thing.

Variations of Asch's procedures have been conducted numerous times (Bond, 2005; Bond & Smith, 1996). We now know that the findings are easily replicated, that there is an increase in conformity with more confederates (up to about five), that teenagers are more prone to conforming than are adults, and that people conform significantly less often when they believe the confederates will not hear their responses (Berndt, 1979; Bond, 2005; Crutchfield, 1955; Deutsch & Gerard, 1955). This last finding is consistent with the notion that participants change their answers because they are concerned about what others think of them. Finally, although we see the effect in virtually every culture that has been studied, more conformity is found in collectivist countries such as Japan and China than in individualistic countries such as the United States (Bond & Smith, 1996). Compared with individualistic cultures, people who live in collectivist cultures place a higher value on the goals of the group than on individual preferences. They also are more motivated to maintain harmony in their interpersonal relations.

The other reason we sometimes go along with the crowd is that people are often a source of information. Psychologists refer to this process as informational influence. Most of us, most of the time, are motivated to do the right thing. If society deems that we put litter in a proper container, speak softly in libraries, and tip our waiter, then that's what most of us will do. But sometimes it's not clear what society expects of us. In these situations, we often rely on descriptive norms (Cialdini, Reno, & Kallgren, 1990). That is, we act the way most people—or most people like us—act. This is not an unreasonable strategy. Other people often have information that we do not, especially when we find ourselves in new situations. If you have ever been part of a conversation that went something like this,

"Do you think we should?"

"Sure. Everyone else is doing it.",

you have experienced the power of informational influence.

However, it's not always easy to obtain good descriptive norm information, which means we sometimes rely on a flawed notion of the norm when deciding how we should behave. A good example of how misperceived norms can lead to problems is found in research on binge drinking among college students. Excessive drinking is a serious problem on many campuses (Mita, 2009). There are many reasons why students binge drink, but one of the most important is their perception of the descriptive norm. How much students drink is highly correlated with how much they believe the average student drinks (Neighbors, Lee, Lewis, Fossos, & Larimer, 2007). Unfortunately, students aren't very good at making this assessment. They notice the boisterous heavy drinker at the party but fail to consider all the students not attending the party. As a result, students typically overestimate the descriptive norm for college student drinking (Borsari & Carey, 2003; Perkins, Haines, & Rice, 2005). Most students believe they consume significantly less alcohol than the norm, a miscalculation that creates a dangerous push toward more and more excessive alcohol consumption. On the positive side, providing students with accurate information about drinking norms has been found to reduce overindulgent drinking (Burger, LaSalvia, Hendricks, Mehdipour, & Neudeck, 2011; Neighbors, Lee, Lewis, Fossos, & Walter, 2009).

Efforts to influence people to engage in healthier or more sustainable behaviors have benefitted from the informational influence. For example, hotels have been able to significantly increase the numbers of people who re-use bath towels (reducing water and energy use) by informing them on signs in their rooms that re-using towels is a typical behavior of other hotel guests. [Image: Infrogmation of New Orleans, https://goo.gl/5P5F0v, CC BY 2.0, https://goo.gl/BRvSA7]

Researchers have demonstrated the power of descriptive norms in a number of areas. Homeowners reduced the amount of energy they used when they learned that they were consuming more energy than their neighbors (Schultz, Nolan, Cialdini, Goldstein, & Griskevicius, 2007). Undergraduates selected the healthy food option when led to believe that other students had made this choice (Burger et al., 2010). Hotel guests were more likely to reuse their towels when a hanger in the bathroom told them that this is what most guests

did (Goldstein, Cialdini, & Griskevicius, 2008). And more people began using the stairs instead of the elevator when informed that the vast majority of people took the stairs to go up one or two floors (Burger & Shelton, 2011).

Obedience

Although we may be influenced by the people around us more than we recognize, whether we conform to the norm is up to us. But sometimes decisions about how to act are not so easy. Sometimes we are directed by a more powerful person to do things we may not want to do. Researchers who study obedience are interested in how people react when given an order or command from someone in a position of authority. In many situations, obedience is a good thing. We are taught at an early age to obey parents, teachers, and police officers. It's also important to follow instructions from judges, firefighters, and lifeguards. And a military would fail to function if soldiers stopped obeying orders from superiors. But, there is also a dark side to obedience. In the name of "following orders" or "just doing my job," people can violate ethical principles and break laws. More disturbingly, obedience often is at the heart of some of the worst of human behavior—massacres, atrocities, and even genocide.

It was this unsettling side of obedience that led to some of the most famous and most controversial research in the history of psychology. Milgram (1963, 1965, 1974) wanted to know why so many otherwise decent German citizens went along with the brutality of the Nazi leaders during the Holocaust. "These inhumane policies may have originated in the mind of a single person," Milgram (1963, p. 371) wrote, "but they could only be carried out on a massive scale if a very large number of persons obeyed orders."

Photographs of victims of Cambodian dictator Pol Pot. From 1975-79 the Khmer Rouge army obediently carried out orders to execute tens of thousands of civilians. [Image: ...your local connection, https://goo.gl/ut9fvk, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

To understand this obedience, Milgram conducted a series of laboratory investigations. In all but one variation of the basic procedure, participants were men recruited from the community surrounding Yale University, where the research was carried

out. These citizens signed up for what they believed to be an experiment on learning and memory. In particular, they were told the research concerned the effects of punishment on learning. Three people were involved in each session. One was the participant. Another was the experimenter. The third was a confederate who pretended to be another participant.

The experimenter explained that the study consisted of a memory test and that one of the men would be the teacher and the other the learner. Through a rigged drawing, the real participant was always assigned the teacher's role and the confederate was always the learner. The teacher watched as the learner was strapped into a chair and had electrodes attached to his wrist. The teacher then moved to the room next door where he was seated in front of a large metal box the experimenter identified as a "shock generator." The front of the box displayed gauges and lights and, most noteworthy, a series of 30 levers across the bottom. Each lever was labeled with a voltage figure, starting with 15 volts and moving up in 15-volt increments to 450 volts. Labels also indicated the strength of the shocks, starting with "Slight Shock" and moving up to "Danger: Severe Shock" toward the end. The last two levers were simply labeled "XXX" in red.

Through a microphone, the teacher administered a memory test to the learner in the next room. The learner responded to the multiple-choice items by pressing one of four buttons that were barely within reach of his strapped-down hand. If the teacher saw the correct answer light up on his side of the wall, he simply moved on to the next item. But if the learner got the item wrong, the teacher pressed one of the shock levers and, thereby, delivered the learner's punishment. The teacher was instructed to start with the 15-volt lever and move up to the next highest shock for each successive wrong answer.

In reality, the learner received no shocks. But he did make a lot of mistakes on the test, which forced the teacher to administer what he believed to be increasingly strong shocks. The purpose of the study was to see how far the teacher would go before refusing to continue. The teacher's first hint that something was amiss came after pressing the 75-volt lever and hearing through the wall the learner say "Ugh!" The learner's reactions became stronger and louder with each lever press. At 150 volts, the learner yelled out, "Experimenter! That's all. Get me out of here. I told you I had heart trouble. My heart's starting to bother me now. Get me out of here, please. My heart's starting to bother me. I refuse to go on. Let me out."

The experimenter's role was to encourage the participant to continue. If at any time the teacher asked to end the session, the experimenter responded with phrases such as, "The experiment requires that you continue," and "You have no other choice, you must go on." The experimenter ended the session only after the teacher stated four successive times that he did not want to continue. All the while, the learner's protests became more intense with each shock. After 300

Diagram of the Milgram Experiment in which the "teacher" (T) was asked to deliver a (supposedly) painful electric shock to the "learner"(L). Would this experiment be approved by a review board today? [Image: Fred the Oyster, https://goo.gl/ZIbQz1, CC BY-SA 4.0, https://goo.gl/X3i0tq]

volts, the learner refused to answer any more questions, which led the experimenter to say that no answer should be considered a wrong answer. After 330 volts, despite vehement protests from the learner following previous shocks, the teacher heard only silence, suggesting that the learner was now physically unable to respond. If the teacher reached 450 volts —the end of the generator—the experimenter told him to continue pressing the 450 volt lever for each wrong answer. It was only after the teacher pressed the 450-volt lever three times that the experimenter announced that the study was over.

If you had been a participant in this research, what would you have done? Virtually everyone says he or she would have stopped early in the process. And most people predict that very few if any participants would keep pressing all the way to 450 volts. Yet in the basic procedure described here, 65 percent of the participants continued to administer shocks to the very end of the session. These were not brutal, sadistic men. They were ordinary citizens who nonetheless followed the experimenter's instructions to administer what they believed to be excruciating if not dangerous electric shocks to an innocent person. The disturbing implication from the findings is that, under the right circumstances, each of us may be capable of acting in some very uncharacteristic and perhaps some very unsettling ways.

Milgram conducted many variations of this basic procedure to explore some of the factors that affect obedience. He found that obedience rates decreased when the learner was in the same room as the experimenter and declined even further when the teacher had to physically touch the learner to administer the punishment. Participants also were less willing to continue the procedure after seeing other teachers refuse to press the shock levers, and they were significantly less obedient when the instructions to continue came from a person they believed to be another participant rather than from the experimenter. Finally, Milgram found that women participants followed the experimenter's instructions at exactly the same rate the men had.

Milgram's obedience research has been the subject of much controversy and discussion. Psychologists continue to debate the extent to which Milgram's studies tell us something about atrocities in general and about the behavior of German citizens during the Holocaust in particular (Miller, 2004). Certainly, there are important features of that time and place that cannot be recreated in a laboratory, such as a pervasive climate of prejudice and dehumanization. Another issue concerns the relevance of the findings. Some people have argued that today we are more aware of the dangers of blind obedience than we were when the research was conducted back in the 1960s. However, findings from partial and modified replications of Milgram's procedures conducted in recent years suggest that people respond to the situation today much like they did a half a century ago (Burger, 2009).
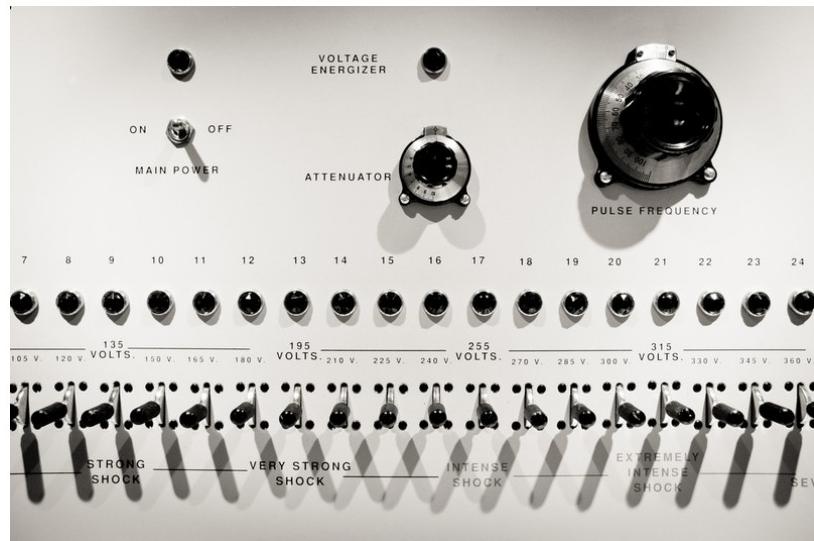
If you had been "a teacher" in the Milgram experiment, would you have behaved differently than the majority who delivered what they thought were massive 450-volt shocks? [Image: Sharon Drummond, https://goo.gl/uQZGtZ, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Another point of controversy concerns the ethical treatment of research participants. Researchers have an obligation to look out for the welfare of their participants. Yet, there is little doubt that many of Milgram's participants experienced intense levels of stress as they went through the procedure. In his defense, Milgram was not unconcerned about the effects of the experience on his participants. And in follow-up questionnaires, the vast majority of his participants said they were pleased they had been part of the research and thought similar experiments should be conducted in the future. Nonetheless, in part because of Milgram's studies, guidelines and procedures were developed to protect research participants from these kinds of experiences. Although Milgram's intriguing findings left us with many

unanswered questions, conducting a full replication of his experiment remains out of bounds by today's standards.

Finally, it is also worth noting that although a number of factors appear to lead to obedience, there are also those who would not obey. In one conceptual replication of the Milgram studies, conducted with a small sample in Italy, the researchers explored the moment that approximately two-thirds of the sample refused to cooperate (Bocchiaro & Zimbardo, 2010). The investigators identified compassion, ethics, and recognition of the situation as problematic as major influences on refusal. Thus, just as there are pressures to obey there are also instances in which people can stand up to authority.

Social psychologists are fond of saying that we are all influenced by the people around us more than we recognize. Of course, each person is unique, and ultimately each of us makes choices about how we will and will not act. But decades of research on conformity and obedience make it clear that we live in a social world and that—for better or worse—much of what we do is a reflection of the people we encounter.

Outside Resources

Student Video: Christine N. Winston and Hemali Maher's 'The Milgram Experiment' gives an excellent 3-minute overview of one of the most famous experiments in the history of psychology. It was one of the winning entries in the 2015 Noba Student Video Award.
https://www.youtube.com/watch?v=uVlUZwkM_G0

Video: An example of information influence in a field setting
http://www.youtube.com/watch?v=4yFeaS60nWk

Video: Scenes from a recent partial replication of Milgram's obedience studies
http://www.youtube.com/watch?v=HwqNP9HRy7Y

Video: Scenes from a recent replication of Asch's conformity experiment
http://www.youtube.com/watch?v=VgDx5g9ql1g

Web: Website devoted to scholarship and research related to Milgram's obedience studies
http://www.stanleymilgram.com

Discussion Questions

1. In what ways do you see normative influence operating among you and your peers? How difficult would it be to go against the norm? What would it take for you to not do something just because all your friends were doing it?

2. What are some examples of how informational influence helps us do the right thing? How can we use descriptive norm information to change problem behaviors?

3. Is conformity more likely or less likely to occur when interacting with other people through social media as compared to face-to-face encounters?

4. When is obedience to authority a good thing and when is it bad? What can be done to prevent people from obeying commands to engage in truly deplorable behavior such as atrocities and massacres?

5. In what ways do Milgram's experimental procedures fall outside the guidelines for research with human participants? Are there ways to conduct relevant research on obedience to authority without violating these guidelines?

Vocabulary

Conformity
Changing one's attitude or behavior to match a perceived social norm.

Descriptive norm
The perception of what most people do in a given situation.

Informational influence
Conformity that results from a concern to act in a socially approved manner as determined by how others act.

Normative influence
Conformity that results from a concern for what other people think of us.

Obedience
Responding to an order or command from a person in a position of authority.

References

Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs, 70* (9, Whole No. 416).

Berndt, T. J. (1979). Developmental changes in conformity to peers and parents. *Developmental Psychology, 15*, 608–616.

Bocchiaro, P., & Zimbardo, P. G. (2010). Defying unjust authority: An exploratory study. *Current Psychology, 29*(2), 155-170.

Bond, R. (2005). Group size and conformity. *Group Processes & Intergroup Relations, 8*, 331–354.

Bond, R., & Smith, P. B. (1996). Culture and conformity: A meta-analysis of studies using Asch's (1952b, 1956) line judgment task. *Psychological Bulletin, 119*, 111–137.

Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol, 64*, 331–341.

Burger, J. M. (2009). Replicating Milgram: Would people still obey today? *American Psychologist, 64*, 1–11.

Burger, J. M., & Shelton, M. (2011). Changing everyday health behaviors through descriptive norm manipulations. *Social Influence, 6*, 69–77.

Burger, J. M., Bell, H., Harvey, K., Johnson, J., Stewart, C., Dorian, K., & Swedroe, M. (2010). Nutritious or delicious? The effect of descriptive norm information on food choice. *Journal of Social and Clinical Psychology, 29*, 228–242.

Burger, J. M., LaSalvia, C. T., Hendricks, L. A., Mehdipour, T., & Neudeck, E. M. (2011). Partying before the party gets started: The effects of descriptive norms on pre-gaming behavior. *Basic and Applied Social Psychology, 33*, 220–227.

Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception-behavior link and social interaction. *Journal of Personality and Social Psychology, 76*, 893–910.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*, 1015–1026.

Crutchfield, R. S. (1955). Conformity and character. *American Psychologist, 10*, 191–198.

Deutsch, M., & Gerard, H. B. (1955). A study of normative and informational social influences upon individual judgment. *Journal of Abnormal and Social Psychology, 51*, 629–636.

Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint:Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research, 35*, 472–482.

Milgram, S. (1974). *Obedience to authority: An experimental view*. New York, NY: Harper & Row.

Milgram, S. (1965). Some conditions of obedience and disobedience to authority. *Human Relations, 18*, 57–76.

Milgram, S. (1963). Behavioral study of obedience. *Journal of Abnormal and Social Psychology, 67*, 371.

Miller, A. G. (2004). What can the Milgram obedience experiments tell us about the Holocaust? Generalizing from the social psychology laboratory. In A. G. Miller (Ed.), *The social psychology of good and evil* (pp. 193–239). New York, NY: Guilford Press.

Mita, M. (2009). College binge drinking still on the rise. *JAMA: Journal of the American Medical Association, 302*, 836–837.

Neighbors, C., Lee, C. M., Lewis, M. A., Fossos, N., & Larimer, M. E. (2007). Are social norms the best predictor of outcomes among heavy-drinking college students? *Journal of Studies on Alcohol and Drugs, 68*, 556–565.

Neighbors, C., Lee, C. M., Lewis, M. A., Fossos, N., & Walter, T. (2009). Internet-based personalized feedback to reduce 21st-birthday drinking: A randomized controlled trial of an even-specific prevention intervention. *Journal of Consulting and Clinical Psychology, 77*, 51–63.

Perkins, H. W., Haines, M. P., & Rice, R. (2005). Misperceiving the college drinking norm and related problems: A nationwide study of exposure to prevention information, perceived norms, and student alcohol misuse. *Journal of Studies on Alcohol, 66*, 470–478.

Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2007). The constructive, destructive, and reconstructive power of social norms. *Psychological Science, 18*, 429–434.

7
Helping and Prosocial Behavior

Dennis L. Poepsel & David A. Schroeder

People often act to benefit other people, and these acts are examples of prosocial behavior. Such behaviors may come in many guises: helping an individual in need; sharing personal resources; volunteering time, effort, and expertise; cooperating with others to achieve some common goals. The focus of this module is on helping—prosocial acts in dyadic situations in which one person is in need and another provides the necessary assistance to eliminate the other's need. Although people are often in need, help is not always given. Why not? The decision of whether or not to help is not as simple and straightforward as it might seem, and many factors need to be considered by those who might help. In this module, we will try to understand how the decision to help is made by answering the question: Who helps when and why?

Learning Objectives

- Learn which situational and social factors affect when a bystander will help another in need.
- Understand which personality and individual difference factors make some people more likely to help than others.
- Discover whether we help others out of a sense of altruistic concern for the victim, for more self-centered and egoistic motives, or both.

Introduction

Go to YouTube and search for episodes of "Primetime: What Would You Do?" You will find

People often overestimate their willingness to help others in need especially when they are asked about a hypothetical situation rather than encountering one in real life. [Image: Ed Yourdon, https://goo.gl/BYFmcu, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

video segments in which apparently innocent individuals are victimized, while onlookers typically fail to intervene. The events are all staged, but they are very real to the bystanders on the scene. The entertainment offered is the nature of the bystanders' responses, and viewers are outraged when bystanders fail to intervene. They are convinced that they would have helped. But would they? Viewers are overly optimistic in their beliefs that they would play the hero. Helping may occur frequently, but help is not always given to those in need. So *when* do people help, and when do they not? All people are not equally helpful—*who* helps? *Why* would a person help another in the first place? Many factors go into a person's decision to help—a fact that the viewers do not fully appreciate. This module will answer the question: Who helps when and why?

When Do People Help?

Social psychologists are interested in answering this question because it is apparent that people vary in their tendency to help others. In 2010 for instance, Hugo Alfredo Tale-Yax was stabbed when he apparently tried to intervene in an argument between a man and woman. As he lay dying in the street, only one man checked his status, but many others simply glanced at the scene and continued on their way. (One passerby did stop to take a cellphone photo, however.) Unfortunately, failures to come to the aid of someone in need are not unique, as the segments on "What Would You Do?" show. Help is not always forthcoming for those who may need it the most. Trying to understand why people do not always help became the focus of **bystander intervention** research (e.g., Latané & Darley, 1970).

To answer the question regarding when people help, researchers have focused on

1. how bystanders come to define emergencies,
2. when they decide to take responsibility for **helping**, and

3. how the costs and benefits of intervening affect their decisions of whether to help.

Defining the situation: The role of pluralistic ignorance

The decision to help is not a simple yes/no proposition. In fact, a series of questions must be addressed before help is given—even in emergencies in which time may be of the essence. Sometimes help comes quickly; an onlooker recently jumped from a Philadelphia subway platform to help a stranger who had fallen on the track. Help was clearly needed and was quickly given. But some situations are ambiguous, and potential helpers may have to decide whether a situation is one in which help, in fact, *needs* to be given.

To define ambiguous situations (including many emergencies), potential helpers may look to the action of others to decide what should be done. But those others are looking around too, also trying to figure out what to do. Everyone is looking, but no one is acting! Relying on others to define the situation and to then erroneously conclude that no intervention is necessary when help is actually needed is called **pluralistic ignorance** (Latané & Darley, 1970). When people use the *inactions* of others to define their own course of action, the resulting pluralistic ignorance leads to less help being given.

Do I have to be the one to help?: Diffusion of responsibility

Simply being with others may facilitate or inhibit whether we get involved in other ways as well. In situations in which help is needed, the presence or absence of others may affect whether a bystander will assume personal responsibility to give the assistance. If the bystander is alone, personal responsibility to help falls solely on the shoulders of that person. But what if others are present? Although it might seem that having more potential helpers around would increase the chances of the victim getting help, the opposite is often the case. Knowing that someone else *could* help seems to relieve bystanders of

How does being in a crowd decrease someone's chance of being helped? How does being in a crowd increase someone's chance of being helped? [Image: flowcomm, https://goo.gl/tiRPch, CC BY 2.0, https://goo.gl/BRvSA7]

personal responsibility, so bystanders do not intervene. This phenomenon is known as diffusion of responsibility (Darley & Latané, 1968).

On the other hand, watch the video of the race officials following the 2013 Boston Marathon after two bombs exploded as runners crossed the finish line. Despite the presence of many spectators, the yellow-jacketed race officials immediately rushed to give aid and comfort to the victims of the blast. Each one no doubt felt a personal responsibility to help by virtue of their official capacity in the event; fulfilling the obligations of their roles overrode the influence of the diffusion of responsibility effect.

There is an extensive body of research showing the negative impact of pluralistic ignorance and diffusion of responsibility on helping (Fisher et al., 2011), in both emergencies and everyday need situations. These studies show the tremendous importance potential helpers place on the social situation in which unfortunate events occur, especially when it is not clear what should be done and who should do it. Other people provide important social information about how we should act and what our personal obligations might be. But does knowing a person needs help and accepting responsibility to provide that help mean the person will get assistance? Not necessarily.

The costs and rewards of helping

The nature of the help needed plays a crucial role in determining what happens next. Specifically, potential helpers engage in a cost–benefit analysis before getting involved (Dovidio et al., 2006). If the needed help is of relatively low cost in terms of time, money, resources, or risk, then help is more likely to be given. Lending a classmate a pencil is easy; confronting someone who is bullying your friend is an entirely different matter. As the unfortunate case of Hugo Alfredo Tale-Yax demonstrates, intervening may cost the life of the helper.

The potential rewards of helping someone will also enter into the equation, perhaps offsetting the cost of helping. Thanks from the recipient of help may be a sufficient reward. If helpful acts are recognized by others, helpers may receive social rewards of praise or monetary rewards. Even avoiding feelings of guilt if one does not help may be considered a benefit. Potential helpers consider how much helping will cost and compare those costs to the rewards that might be realized; it is the economics of helping. If costs outweigh the rewards, helping is less likely. If rewards are greater than cost, helping is more likely.

Who Helps?

Do you know someone who always seems to be ready, willing, and able to help? Do you know someone who never helps out? It seems there are personality and individual differences in the helpfulness of others. To answer the question of who chooses to help, researchers have examined 1) the role that sex and gender play in helping, 2) what personality traits are associated with helping, and 3) the characteristics of the "prosocial personality."

Who are more helpful—men or women?

In terms of individual differences that might matter, one obvious question is whether men or women are more likely to help. In one of the "What Would You Do?" segments, a man takes a woman's purse from the back of her chair and then leaves the restaurant. Initially, no one responds, but as soon as the woman asks about her missing purse, a group of men immediately rush out the door to catch the thief. So, are men more helpful than women? The quick answer is "not necessarily." It all depends on the type of help needed. To be very clear, the general level of helpfulness may be pretty much equivalent between the sexes, but men and women help in different ways (Becker & Eagly, 2004; Eagly & Crowley, 1986). What accounts for these differences?

Sometimes there are situations that override the gender divide between the helpfulness of men and women and they offer help in equal numbers - for example, volunteering. [Image: Daniel Thornton, https://goo.gl/Rn7yL0, CC BY 2.0, https://goo.gl/BRvSA7]

Two factors help to explain sex and gender differences in helping. The first is related to the cost–benefit analysis process discussed previously. Physical differences between men and women may come into play (e.g., Wood & Eagly, 2002); the fact that men tend to have greater upper body strength than women makes the cost of intervening in some situations less for a man. Confronting a thief is a risky proposition, and some strength may be needed in case the perpetrator decides to fight. A bigger, stronger bystander is less likely to be injured and more likely to be successful.

The second explanation is simple socialization. Men and women have traditionally been raised to play different social roles that prepare them to respond differently to the needs of others,

and people tend to help in ways that are most consistent with their gender roles. Female gender roles encourage women to be compassionate, caring, and nurturing; male gender roles encourage men to take physical risks, to be heroic and chivalrous, and to be protective of those less powerful. As a consequence of social training and the gender roles that people have assumed, men may be more likely to jump onto subway tracks to save a fallen passenger, but women are more likely to give comfort to a friend with personal problems (Diekman & Eagly, 2000; Eagly & Crowley, 1986). There may be some specialization in the types of help given by the two sexes, but it is nice to know that there is someone out there—man or woman —who is able to give you the help that you need, regardless of what kind of help it might be.

A trait for being helpful: Agreeableness

Graziano and his colleagues (e.g., Graziano & Tobin, 2009; Graziano, Habishi, Sheese, & Tobin, 2007) have explored how agreeableness—one of the Big Five personality dimensions (e.g., Costa & McCrae, 1988)—plays an important role in prosocial behavior. Agreeableness is a core trait that includes such dispositional characteristics as being sympathetic, generous, forgiving, and helpful, and behavioral tendencies toward harmonious social relations and likeability. At the conceptual level, a positive relationship between agreeableness and helping may be expected, and research by Graziano et al. (2007) has found that those higher on the agreeableness dimension are, in fact, more likely than those low on agreeableness to help siblings, friends, strangers, or members of some other group. Agreeable people seem to expect that others will be similarly cooperative and generous in interpersonal relations, and they, therefore, act in helpful ways that are likely to elicit positive social interactions.

Searching for the prosocial personality

Rather than focusing on a single trait, Penner and his colleagues (Penner, Fritzsche, Craiger, & Freifeld, 1995; Penner & Orom, 2010) have taken a somewhat broader perspective and identified what they call the prosocial personality orientation. Their research indicates that two major characteristics are related to the prosocial personality and prosocial behavior. The first characteristic is called other-oriented empathy: People high on this dimension have a strong sense of social responsibility, empathize with and feel emotionally tied to those in need, understand the problems the victim is experiencing, and have a heightened sense of moral obligation to be helpful. This factor has been shown to be highly correlated with the trait of agreeableness discussed previously. The second characteristic, helpfulness, is more behaviorally oriented. Those high on the helpfulness factor have been helpful in the past, and because they believe they can be effective with the help they give, they are more likely to be helpful in the future.

Why Help?

Finally, the question of *why* a person would help needs to be asked. What motivation is there for that behavior? Psychologists have suggested that 1) evolutionary forces may serve to predispose humans to help others, 2) egoistic concerns may determine if and when help will be given, and 3) selfless, altruistic motives may also promote helping in some cases.

Evolutionary roots for prosocial behavior

Evolutionary theory suggests that being a good helper was a benefit for survival and reproductive success. And we don't just help our family members, reciprocal altruism has also been a benefit to our survival. [Image: TimJN1, https://goo.gl/iTQfWk, CC BY-SA 2.0, https://goo.gl/eH69he]

Our evolutionary past may provide keys about why we help (Buss, 2004). Our very survival was no doubt promoted by the prosocial relations with clan and family members, and, as a hereditary consequence, we may now be especially likely to help those closest to us—blood-related relatives with whom we share a genetic heritage. According to evolutionary psychology, we are helpful in ways that increase the chances that our DNA will be passed along to future generations (Burnstein, Crandall, & Kitayama, 1994)—the goal of the "selfish gene" (Dawkins, 1976). Our personal DNA may not always move on, but we can still be successful in getting some portion of our DNA transmitted if our daughters, sons, nephews, nieces, and cousins survive to produce offspring. The favoritism shown for helping our blood relatives is called **kin selection** (Hamilton, 1964).

But, we do not restrict our relationships just to our own family members. We live in groups that include individuals who are unrelated to us, and we often help them too. Why? **Reciprocal altruism** (Trivers, 1971) provides the answer. Because of reciprocal altruism, we are all better off in the long run if we help one another. If helping someone now increases the chances that you will be helped later, then your overall chances of survival are increased. There is the chance that someone will take advantage of your help and not return your favors. But people seem predisposed to identify those who fail to reciprocate, and punishments including social

exclusion may result (Buss, 2004). Cheaters will not enjoy the benefit of help from others, reducing the likelihood of the survival of themselves and their kin.

Evolutionary forces may provide a general inclination for being helpful, but they may not be as good an explanation for why we help in the here and now. What factors serve as proximal influences for decisions to help?

Egoistic motivation for helping

Most people would like to think that they help others because they are concerned about the other person's plight. In truth, the reasons why we help may be more about ourselves than others: Egoistic or selfish motivations may make us help. Implicitly, we may ask, "What's in it *for me*?" There are two major theories that explain what types of reinforcement helpers may be seeking. The negative state relief model (e.g., Cialdini, Darby, & Vincent, 1973; Cialdini, Kenrick, & Baumann, 1982) suggests that people sometimes help in order to make themselves feel better. Whenever we are feeling sad, we can use helping someone else as a positive mood boost to feel happier. Through socialization, we have learned that helping can serve as a secondary reinforcement that will relieve negative moods (Cialdini & Kenrick, 1976).

The arousal: cost–reward model provides an additional way to understand why people help (e.g., Piliavin, Dovidio, Gaertner, & Clark, 1981). This model focuses on the aversive feelings aroused by seeing another in need. If you have ever heard an injured puppy yelping in pain, you know that feeling, and you know that the best way to relieve that feeling is to help and to comfort the puppy. Similarly, when we see someone who is suffering in some way (e.g., injured, homeless, hungry), we vicariously experience a sympathetic arousal that is unpleasant, and we are motivated to eliminate that aversive state. One way to do that is to help the person in need. By eliminating the victim's pain, we eliminate our own aversive arousal. Helping is an effective way to alleviate our own discomfort.

As an egoistic model, the arousal: cost–reward model explicitly includes the cost/reward considerations that come into play. Potential helpers will find ways to cope with the aversive arousal that will minimize their costs—maybe by means other than direct involvement. For example, the costs of directly confronting a knife-wielding assailant might stop a bystander from getting involved, but the cost of some *indirect* help (e.g., calling the police) may be acceptable. In either case, the victim's need is addressed. Unfortunately, if the costs of helping are too high, bystanders may reinterpret the situation to justify not helping at all. For some, fleeing the situation causing their distress may do the trick (Piliavin et al., 1981).

The egoistically based negative state relief model and the arousal: cost–reward model see the primary motivation for helping as being the helper's own outcome. Recognize that the victim's outcome is of relatively little concern to the helper—benefits to the victim are incidental byproducts of the exchange (Dovidio et al., 2006). The victim may be helped, but the helper's real motivation according to these two explanations is egoistic: Helpers help to the extent that it makes them feel better.

Altruistic help

Altruism is helping with the aim of improving the wellbeing of others. Having a feeling of empathy for others is an important aspect of altruism. [Image: Ed Yourdon, https://goo.gl/MWCLk1, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Although many researchers believe that **egoism** is the only motivation for helping, others suggest that **altruism**—helping that has as its ultimate goal the improvement of another's welfare—may also be a motivation for helping under the right circumstances. Batson (2011) has offered the **empathy–altruism model** to explain altruistically motivated helping for which the helper expects no benefits. According to this model, the key for altruism is empathizing with the victim, that is, putting oneself in the shoes of the victim and imagining how the victim must feel. When taking this perspective and having **empathic concern**, potential helpers become primarily interested in increasing the well-being of the victim, even if the helper must incur some costs that might otherwise be easily avoided. The empathy–altruism model does not dismiss egoistic motivations; helpers not empathizing with a victim may experience **personal distress** and have an egoistic motivation, not unlike the feelings and motivations explained by the arousal: cost–reward model. Because egoistically motivated individuals are primarily concerned with their own cost–benefit outcomes, they are less likely to help if they think they can escape the situation with no costs to themselves. In contrast, altruistically motivated helpers are willing to accept the cost of helping to benefit a person with whom they have empathized—this "self-sacrificial" approach to helping is the hallmark of altruism (Batson, 2011).

Although there is still some controversy about whether people can ever act for purely altruistic

motives, it is important to recognize that, while helpers may derive some personal rewards by helping another, the help that has been given is also benefitting someone who was in need. The residents who offered food, blankets, and shelter to stranded runners who were unable to get back to their hotel rooms because of the Boston Marathon bombing undoubtedly received positive rewards because of the help they gave, but those stranded runners who were helped got what they needed badly as well. "In fact, it is quite remarkable how the fates of people who have never met can be so intertwined and complementary. Your benefit is mine; and mine is yours" (Dovidio et al., 2006, p. 143).

Conclusion

We started this module by asking the question, "Who helps when and why?" As we have shown, the question of when help will be given is not quite as simple as the viewers of "What Would You Do?" believe. The power of the situation that operates on potential helpers in real time is not fully considered. What might appear to be a split-second decision to help is actually the result of consideration of multiple situational factors (e.g., the helper's interpretation of the situation, the presence and ability of others to provide the help, the results of a cost–benefit analysis) (Dovidio et al., 2006). We have

Helping feels good to the one who helps and the one who is being helped. [Image: International of Red Cross and Red Crescent Societies, https://goo.gl/0DXo8S, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

found that men and women tend to help in different ways—men are more impulsive and physically active, while women are more nurturing and supportive. Personality characteristics such as agreeableness and the prosocial personality orientation also affect people's likelihood of giving assistance to others. And, why would people help in the first place? In addition to evolutionary forces (e.g., kin selection, reciprocal altruism), there is extensive evidence to show that helping and prosocial acts may be motivated by selfish, egoistic desires; by selfless, altruistic goals; or by some combination of egoistic and altruistic motives. (For a fuller consideration of the field of prosocial behavior, we refer you to Dovidio et al. [2006].)

Outside Resources

Article: Alden, L. E., & Trew, J. L. (2013). If it makes you happy: Engaging in kind acts increases positive affect in socially anxious individuals. Emotion, 13, 64-75. doi:10.1037/a0027761 Review available at:
http://nymag.com/scienceofus/2015/07/one-way-to-get-over-your-social-anxiety-be-nice.html

Book: Batson, C.D. (2009). Altruism in humans. New York, NY: Oxford University Press.

Book: Dovidio, J. F., Piliavin, J. A., Schroeder, D. A., & Penner, L. A. (2006). The social psychology of prosocial behavior. Mahwah, NJ: Erlbaum.

Book: Mikuliner, M., & Shaver, P. R. (2010). Prosocial motives, emotions, and behavior: The better angels of our nature. Washington, DC: American Psychological Association.

Book: Schroeder, D. A. & Graziano, W. G. (forthcoming). The Oxford handbook of prosocial behavior. New York, NY: Oxford University Press.

Institution: Center for Generosity, University of Notre Dame, 936 Flanner Hall, Notre Dame, IN 46556.
http://www.generosityresearch.nd.edu

Institution: The Greater Good Science Center, University of California, Berkeley.
http://www.greatergood.berkeley.edu

News Article: Bystanders Stop Suicide Attempt
http://jfmueller.faculty.noctrl.edu/crow/bystander.pdf

Social Psychology Network (SPN)
http://www.socialpsychology.org/social.htm#prosocial

Video: Episodes (individual) of "Primetime: What Would You Do?"
http://www.YouTube.com

Video: Episodes of "Primetime: What Would You Do?" that often include some commentary from experts in the field may be available at
http://www.abc.com

Video: From The Inquisitive Mind website, a great overview of different aspects of helping and pro-social behavior including - pluralistic ignorance, diffusion of responsibility, the bystander effect, and empathy.
https://www.youtube.com/watch?v=i2aVjU3F_t0

Discussion Questions

1. Pluralistic ignorance suggests that inactions by other observers of an emergency will decrease the likelihood that help will be given. What do you think will happen if even one other observer begins to offer assistance to a victim?

2. In addition to those mentioned in the module, what other costs and rewards might affect a potential helper's decision of whether to help? Receiving help to solve some problem is an obvious benefit for someone in need; are there any costs that a person might have to bear as a result of receiving help from someone?

3. What are the characteristics possessed by your friends who are most helpful? By your friends who are least helpful? What has made your helpful friends and your unhelpful friends so different? What kinds of help have they given to you, and what kind of help have you given to them? Are you a helpful person?

4. Do you think that sex and gender differences in the frequency of helping and the kinds of helping have changed over time? Why? Do you think that we might expect more changes in the future?

5. What do you think is the primary motive for helping behavior: egoism or altruism? Are there any professions in which people are being "pure" altruists, or are some egoistic motivations always playing a role?

6. There are other prosocial behaviors in addition to the kind of helping discussed here. People volunteer to serve many different causes and organizations. People come together to cooperate with one another to achieve goals that no one individual could reach alone. How do you think the factors that affect helping might affect prosocial actions such as volunteering and cooperating? Do you think that there might be other factors that make people more or less likely to volunteer their time and energy or to cooperate in a group?

Vocabulary

Agreeableness
A core personality trait that includes such dispositional characteristics as being sympathetic, generous, forgiving, and helpful, and behavioral tendencies toward harmonious social relations and likeability.

Altruism
A motivation for helping that has the improvement of another's welfare as its ultimate goal, with no expectation of any benefits for the helper.

Arousal: cost–reward model
An egoistic theory proposed by Piliavin et al. (1981) that claims that seeing a person in need leads to the arousal of unpleasant feelings, and observers are motivated to eliminate that aversive state, often by helping the victim. A cost–reward analysis may lead observers to react in ways other than offering direct assistance, including indirect help, reinterpretation of the situation, or fleeing the scene.

Bystander intervention
The phenomenon whereby people intervene to help others in need even if the other is a complete stranger and the intervention puts the helper at risk.

Cost–benefit analysis
A decision-making process that compares the cost of an action or thing against the expected benefit to help determine the best course of action.

Diffusion of responsibility
When deciding whether to help a person in need, knowing that there are others who could also provide assistance relieves bystanders of some measure of personal responsibility, reducing the likelihood that bystanders will intervene.

Egoism
A motivation for helping that has the improvement of the helper's own circumstances as its primary goal.

Empathic concern
According to Batson's empathy–altruism hypothesis, observers who empathize with a person in need (that is, put themselves in the shoes of the victim and imagine how that person feels)

will experience empathic concern and have an altruistic motivation for helping.

Empathy–altruism model
An altruistic theory proposed by Batson (2011) that claims that people who put themselves in the shoes of a victim and imagining how the victim feel will experience empathic concern that evokes an altruistic motivation for helping.

Helpfulness
A component of the prosocial personality orientation; describes individuals who have been helpful in the past and, because they believe they can be effective with the help they give, are more likely to be helpful in the future.

Helping
Prosocial acts that typically involve situations in which one person is in need and another provides the necessary assistance to eliminate the other's need.

Kin selection
According to evolutionary psychology, the favoritism shown for helping our blood relatives, with the goals of increasing the likelihood that some portion of our DNA will be passed on to future generations.

Negative state relief model
An egoistic theory proposed by Cialdini et al. (1982) that claims that people have learned through socialization that helping can serve as a secondary reinforcement that will relieve negative moods such as sadness.

Other-oriented empathy
A component of the prosocial personality orientation; describes individuals who have a strong sense of social responsibility, empathize with and feel emotionally tied to those in need, understand the problems the victim is experiencing, and have a heightened sense of moral obligations to be helpful.

Personal distress
According to Batson's empathy–altruism hypothesis, observers who take a detached view of a person in need will experience feelings of being "worried" and "upset" and will have an egoistic motivation for helping to relieve that distress.

Pluralistic ignorance
Relying on the actions of others to define an ambiguous need situation and to then erroneously

conclude that no help or intervention is necessary.

Prosocial behavior
Social behavior that benefits another person.

Prosocial personality orientation
A measure of individual differences that identifies two sets of personality characteristics (other-oriented empathy, helpfulness) that are highly correlated with prosocial behavior.

Reciprocal altruism
According to evolutionary psychology, a genetic predisposition for people to help those who have previously helped them.

References

Batson, C. D. (2011). *Altruism in humans*. New York, NY: Oxford University Press.

Becker, S. W., & Eagly, A. H. (2004). The heroism of women and men. *American Psychologist, 59*, 163–178.

Burnstein, E., Crandall, C., & Kitayama, S. (1994). Some neo-Darwinian decision rules for altruism: Weighing cues for inclusive fitness as a function of the biological importance of the decision. *Journal of Personality and Social Psychology, 67*, 773–789.

Buss, D. M. (2004). *Evolutionary psychology: The new science of the mind*. Boston, MA: Allyn Bacon.

Cialdini, R. B., & Kenrick, D. T. (1976). Altruism as hedonism: A social developmental perspective on the relationship of negative mood state and helping. *Journal of Personality and Social Psychology, 34*, 907–914.

Cialdini, R. B., Darby, B. K. & Vincent, J. E. (1973). Transgression and altruism: A case for hedonism. *Journal of Experimental Social Psychology, 9*, 502–516.

Cialdini, R. B., Kenrick, D. T., & Baumann, D. J. (1982). Effects of mood on prosocial behavior in children and adults. In N. Eisenberg (Ed.), *The development of prosocial behavior* (pp. 339–359). New York, NY: Academic Press.

Costa, P. T., & McCrae, R. R. (1998). Trait theories in personality. In D. F. Barone, M. Hersen, & V. B. Van Hasselt (Eds.), *Advanced Personality* (pp. 103–121). New York, NY: Plenum.

Darley, J. M. & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. *Journal of Personality and Social Psychology, 8*, 377–383.

Dawkins, R. (1976). *The selfish gene*. Oxford, U.K.: Oxford University Press.

Diekman, A. B., & Eagly, A. H. (2000). Stereotypes as dynamic structures: Women and men of the past, present, and future. *Personality and Social Psychology Bulletin, 26*, 1171–1188.

Dovidio, J. F., Piliavin, J. A., Schroeder, D. A., & Penner, L. A. (2006). *The social psychology of prosocial behavior*. Mahwah, NJ: Erlbaum.

Eagly, A. H., & Crowley, M. (1986). Gender and helping behavior: A meta-analytic review of the social psychological literature. *Psychological Review, 66*, 183–201.

Fisher, P., Krueger, J. I., Greitemeyer, T., Vogrincie, C., Kastenmiller, A., Frey, D., Henne, M., Wicher, M., & Kainbacher, M. (2011). The bystander-effect: A meta-analytic review of bystander intervention in dangerous and non-dangerous emergencies. *Psychological Bulletin, 137*, 517–537.

Graziano, W. G., & Tobin, R. (2009). Agreeableness. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of Individual Differences in Social Behavior*. New York, NY: Guilford Press.

Graziano, W. G., Habashi, M. M., Sheese, B. E., & Tobin, R. M. (2007). Agreeableness, empathy, and helping: A person x situation perspective. *Journal of Personality and Social Psychology, 93*, 583–599.

Hamilton, W. D. (1964). The genetic evolution of social behavior. *Journal of Theoretical Biology, 7*, 1–52.

Latané, B., & Darley, J. M. (1970). *The unresponsive bystander: Why doesn't he help?* New York, NY: Appleton-Century-Crofts.

Penner, L. A., & Orom, H. (2010). Enduring goodness: A Person X Situation perspective on prosocial behavior. In M. Mikuliner & P.R. Shaver, P.R. (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature* (pp. 55–72). Washington, DC: American Psychological Association.

Penner, L. A., Fritzsche, B. A., Craiger, J. P., & Freifeld, T. R. (1995). Measuring the prosocial personality. In J. Butcher & C.D. Spielberger (Eds.), *Advances in personality assessment* (Vol. 10, pp. 147–163). Hillsdale, NJ: Erlbaum.

Piliavin, J. A., Dovidio, J. F., Gaertner, S. L., & Clark, R. D., III (1981). *Emergency intervention*. New York, NY: Academic Press.

Trivers, R. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46*, 35–57.

Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: Implications for the origins of sex differences. *Psychological Bulletin, 128*, 699–727.

Groups

8
The Psychology of Groups

Donelson R. Forsyth

This module assumes that a thorough understanding of people requires a thorough understanding of groups. Each of us is an autonomous individual seeking our own objectives, yet we are also members of groups—groups that constrain us, guide us, and sustain us. Just as each of us influences the group and the people in the group, so, too, do groups change each one of us. Joining groups satisfies our need to belong, gain information and understanding through social comparison, define our sense of self and social identity, and achieve goals that might elude us if we worked alone. Groups are also practically significant, for much of the world's work is done by groups rather than by individuals. Success sometimes eludes our groups, but when group members learn to work together as a cohesive team their success becomes more certain. People also turn to groups when important decisions must be made, and this choice is justified as long as groups avoid such problems as group polarization and groupthink.

Learning Objectives

- Review the evidence that suggests humans have a fundamental need to belong to groups.

- Compare the sociometer model of self-esteem to a more traditional view of self-esteem.

- Use theories of social facilitation to predict when a group will perform tasks slowly or quickly (e.g., students eating a meal as a group, workers on an assembly line, or a study group).

- Summarize the methods used by Latané, Williams, and Harkins to identify the relative impact of social loafing and coordination problems on group performance.

- Describe how groups change over time.

- Apply the theory of groupthink to a well-known decision-making group, such as the group of advisors responsible for planning the Bay of Pigs operation.

- List and discuss the factors that facilitate and impede group performance and decision making.

- Develop a list of recommendations that, if followed, would minimize the possibility of groupthink developing in a group.

The Psychology of Groups

Psychologists study groups because nearly all human activities—working, learning, worshiping, relaxing, playing, and even sleeping—occur in groups. The lone individual who is cut off from all groups is a rarity. Most of us live out our lives in groups, and these groups have a profound impact on our thoughts, feelings, and actions. Many psychologists focus their attention on single individuals, but social psychologists expand their analysis to include groups, organizations, communities, and even cultures.

How many groups are you a part of on a daily basis? Whether it's family, class, work, social, sports, church or other areas, we typically spend a good deal of our time and attention each day interacting with others in groups. [Image: CC0 Public Domain, https://goo.gl/m25gce]

This module examines the psychology of groups and group membership. It begins with a basic question: What is the psychological significance of groups? People are, undeniably, more often in groups rather than alone. What accounts for this marked gregariousness and what does it say about our psychological makeup? The module then reviews some of the key findings from studies of groups. Researchers have asked many questions about people and groups: Do people work as hard as they can when they are in groups? Are groups more cautious than individuals? Do groups make wiser decisions than single individuals? In many cases the answers are not what common sense and folk wisdom might suggest.

The Psychological Significance of Groups

Many people loudly proclaim their autonomy and independence. Like Ralph Waldo Emerson, they avow, "I must be myself. I will not hide my tastes or aversions . . . . I will seek my own" (1903/2004, p. 127). Even though people are capable of living separate and apart from others, they join with others because groups meet their psychological and social needs.

The Need to Belong

The need to belong is a strong psychological motivation. [Image: CC0 Public Domain, https://goo.gl/m25gce]

Across individuals, societies, and even eras, humans consistently seek inclusion over exclusion, membership over isolation, and acceptance over rejection. As Roy Baumeister and Mark Leary conclude, humans have a *need to belong*: "a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and impactful interpersonal relationships" (1995, p. 497). And most of us satisfy this need by joining groups. When surveyed, 87.3% of Americans reported that they lived with other people, including family members, partners, and roommates (Davis & Smith, 2007). The majority, ranging from 50% to 80%, reported regularly doing things in groups, such as attending a sports event together, visiting one another for the evening, sharing a meal together, or going out as a group to see a movie (Putnam, 2000).

People respond negatively when their need to belong is unfulfilled. For example, college students often feel homesick and lonely when they first start college, but not if they belong to a cohesive, socially satisfying group (Buote et al., 2007). People who are accepted members of a group tend to feel happier and more satisfied. But should they be rejected by a group, they feel unhappy, helpless, and depressed. Studies of ostracism—the deliberate exclusion from groups—indicate this experience is highly stressful and can lead to depression, confused thinking, and even aggression (Williams, 2007). When researchers used a functional magnetic resonance imaging scanner to track neural responses to exclusion, they found that people who were left out of a group activity displayed heightened cortical activity in two specific areas of the brain—the dorsal anterior cingulate cortex and the anterior insula. These areas of the brain are associated with the experience of physical pain sensations (Eisenberger, Lieberman, & Williams, 2003). It hurts, quite literally, to be left out of a group.

Affiliation in Groups

Groups not only satisfy the need to belong, they also provide members with information, assistance, and social support. Leon Festinger's theory of <u>social comparison</u> (1950, 1954) suggested that in many cases people join with others to evaluate the accuracy of their personal beliefs and attitudes. Stanley Schachter (1959) explored this process by putting individuals in ambiguous, stressful situations and asking them if they wished to wait alone or with others. He found that people *affiliate* in such situations—they seek the company of others.

Although any kind of companionship is appreciated, we prefer those who provide us with reassurance and support as well as accurate information. In some cases, we also prefer to join with others who are even worse off than we are. Imagine, for example, how you would respond when the teacher hands back the test and yours is marked 85%. Do you want to affiliate with a friend who got a 95% or a friend who got a 78%? To maintain a sense of self-worth, people seek out and compare themselves to the less fortunate. This process is known as *downward social comparison*.

Identity and Membership

Groups are not only founts of information during times of ambiguity, they also help us answer the existentially significant question, "Who am I?" Common sense tells us that our sense of self is our private definition of who we are, a kind of archival record of our experiences, qualities, and capabilities. Yet, the self also includes all those qualities that spring from memberships in groups. People are defined not only by their traits, preferences, interests, likes, and dislikes, but also by their friendships, social roles, family connections, and group memberships. The self is not just a "me," but also a "we."

Even demographic qualities such as sex or age can influence us if we categorize ourselves based on these qualities. <u>Social identity theory</u>, for example, assumes that we don't just classify *other* people into such social categories as man, woman, Anglo, elderly, or college student, but we also categorize ourselves. Moreover, if we strongly identify with these categories, then we will ascribe the characteristics of the typical member of these groups to ourselves, and so stereotype ourselves. If, for example, we believe that college students are intellectual, then we will assume we, too, are intellectual if we identify with that group (Hogg, 2001).

Groups also provide a variety of means for maintaining and enhancing a sense of self-worth, as our assessment of the quality of groups we belong to influences our <u>collective self-esteem</u>

(Crocker & Luhtanen, 1990). If our self-esteem is shaken by a personal setback, we can focus on our group's success and prestige. In addition, by comparing our group to other groups, we frequently discover that we are members of the better group, and so can take pride in our superiority. By denigrating other groups, we elevate both our personal and our collective self-esteem (Crocker & Major, 1989).

Mark Leary's **sociometer model** goes so far as to suggest that "self-esteem is part of a sociometer that monitors peoples' relational value in other people's eyes" (2007, p. 328). He maintains self-esteem is not just an index of one's sense of personal value, but also an indicator of acceptance into groups. Like a gauge that indicates how much fuel is left in the tank, a dip in self-esteem indicates exclusion from our group is likely. Disquieting feelings of self-worth, then, prompt us to search for and correct characteristics and qualities that put us at risk of social exclusion. Self-esteem is not just high self-regard, but the self-approbation that we feel when included in groups (Leary & Baumeister, 2000).

Evolutionary Advantages of Group Living

Groups may be humans' most useful invention, for they provide us with the means to reach goals that would elude us if we remained alone. Individuals in groups can secure advantages and avoid disadvantages that would plague the lone individuals. In his theory of social integration, Moreland concludes that groups tend to form whenever "people become dependent on one another for the satisfaction of their needs" (1987, p. 104). The advantages of group life may be so great that humans are biologically prepared to seek membership and avoid isolation. From an evolutionary psychology perspective, because groups have increased humans' overall fitness for countless generations, individuals who carried genes that promoted solitude-seeking were less likely to survive and procreate compared to those with genes that prompted them to join groups (Darwin, 1859/1963). This process of natural selection culminated in the creation of a modern human who seeks out membership in groups instinctively, for most of us are descendants of "joiners" rather than "loners."

Motivation and Performance

Groups usually exist for a reason. In groups, we solve problems, create products, create standards, communicate knowledge, have fun, perform arts, create institutions, and even ensure our safety from attacks by other groups. But do groups always outperform individuals?

Social Facilitation in Groups

Do people perform more effectively when alone or when part of a group? Norman Triplett (1898) examined this issue in one of the first empirical studies in psychology. While watching bicycle races, Triplett noticed that cyclists were faster when they competed against other racers than when they raced alone against the clock. To determine if the presence of others leads to the psychological stimulation that enhances performance, he arranged for 40 children to play a game that involved turning a small reel as quickly as possible (see Figure 1). When he measured how quickly they turned the reel, he confirmed that children performed slightly better when they played the game in pairs compared to when they played alone (see Stroebe, 2012; Strube, 2005).
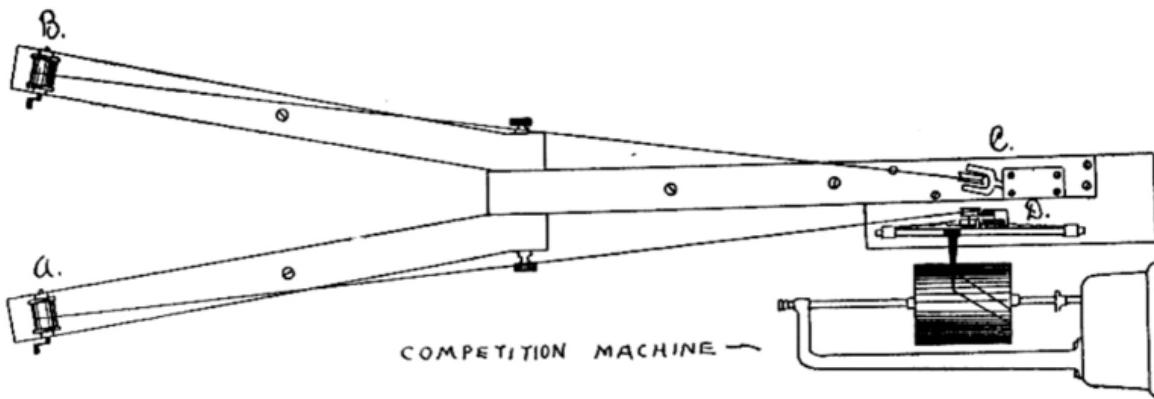

Figure 1: The "competition machine" Triplett used to study the impact of competition on performance. Triplett's study was one of the first laboratory studies conducted in the field of social psychology. Triplett, N. (1898)

Triplett succeeded in sparking interest in a phenomenon now known as **social facilitation**: the enhancement of an individual's performance when that person works in the presence of other people. However, it remained for Robert Zajonc (1965) to specify when social facilitation does and does not occur. After reviewing prior research, Zajonc noted that the facilitating effects of an audience usually only occur when the task requires the person to perform dominant responses, i.e., ones that are well-learned or based on instinctive behaviors. If the task requires nondominant responses, i.e., novel, complicated, or untried behaviors that the organism has never performed before or has performed only infrequently, then the presence of others inhibits performance. Hence, students write poorer quality essays on complex philosophical questions when they labor in a group rather than alone (Allport, 1924), but they make fewer mistakes in solving simple, low-level multiplication problems with an audience or a coactor than when they work in isolation (Dashiell, 1930).

Social facilitation, then, depends on the task: other people facilitate performance when the

task is so simple that it requires only dominant responses, but others interfere when the task requires nondominant responses. However, a number of psychological processes combine to influence when social facilitation, not social interference, occurs. Studies of the challenge-threat response and brain imaging, for example, confirm that we respond physiologically and neurologically to the presence of others (Blascovich, Mendes, Hunter, & Salomon, 1999). Other people also can trigger *evaluation apprehension,* particularly when we feel that our individual performance will be known to others, and those others might judge it negatively (Bond, Atoum, & VanLeeuwen, 1996). The presence of other people can also cause perturbations in our capacity to concentrate on and process information (Harkins, 2006). Distractions due to the presence of other people have been shown to improve performance on certain tasks, such as the *Stroop task*, but undermine performance on more cognitively demanding tasks(Huguet, Galvaing, Monteil, & Dumas, 1999).

Social Loafing

Groups usually outperform individuals. A single student, working alone on a paper, will get less done in an hour than will four students working on a group project. One person playing a tug-of-war game against a group will lose. A crew of movers can pack up and transport your household belongings faster than you can by yourself. As the saying goes, "Many hands make light the work" (Littlepage, 1991; Steiner, 1972).

Groups, though, tend to be underachievers. Studies of social facilitation confirmed the positive motivational benefits of working with other people on well-practiced tasks in which each member's contribution to the collective enterprise can be identified and evaluated. But what happens when tasks require a truly collective effort? First, when people work together they must coordinate their individual activities and contributions to reach the maximum level of efficiency—but they rarely do (Diehl & Stroebe, 1987). Three people in a tug-of-war competition, for example, invariably pull and pause at slightly different times, so their efforts are uncoordinated. The result is *coordination loss*: the three-person group is stronger than a single person, but not three times as strong. Second, people just don't exert as much effort when working on a collective endeavor, nor do they expend as much cognitive effort trying to solve problems, as they do when working alone. They display **social loafing** (Latané, 1981).

Bibb Latané, Kip Williams, and Stephen Harkins (1979) examined both coordination losses and social loafing by arranging for students to cheer or clap either alone or in groups of varying sizes. The students cheered alone or in 2- or 6-person groups, or they were lead to believe they were in 2- or 6-person groups (those in the "pseudo-groups" wore blindfolds and headsets that played masking sound). As Figure 2 indicates, groups generated more noise than solitary

subjects, but the productivity dropped as the groups became larger in size. In dyads, each subject worked at only 66% of capacity, and in 6-person groups at 36%. Productivity also dropped when subjects merely believed they were in groups. If subjects thought that one other person was shouting with them, they shouted 82% as intensely, and if they thought five other people were shouting, they reached only 74% of their capacity. These loses in productivity were not due to coordination problems; this decline in production could be attributed only to a reduction in effort—to social loafing (Latané et al., 1979, Experiment 2).
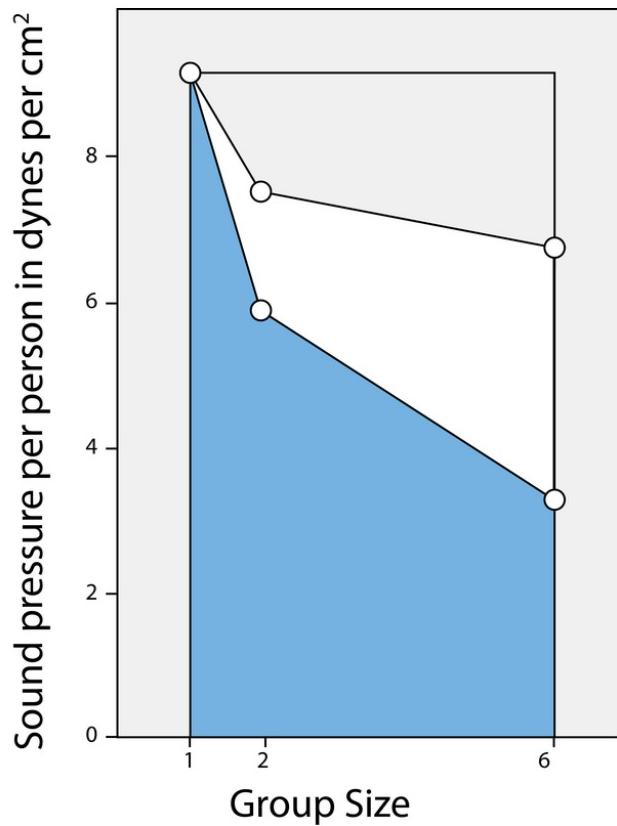

Figure 2: Sound pressure per person as a function of group or pseudo group size. Latane, B. (1981)

Teamwork

Social loafing is no rare phenomenon. When sales personnel work in groups with shared goals, they tend to "take it easy" if another salesperson is nearby who can do their work (George, 1992). People who are trying to generate new, creative ideas in group brainstorming sessions usually put in less effort and are thus less productive than people who are generating

Social loafing can be a problem. One way to overcome it is by recognizing that each group member has an important part to play in the success of the group. [Image: Marc Dalmulder, https://goo.gl/Xa5aiE, CC BY 2.0, https://goo.gl/BRvSA7]

new ideas individually (Paulus & Brown, 2007). Students assigned group projects often complain of inequity in the quality and quantity of each member's contributions: Some people just don't work as much as they should to help the group reach its learning goals (Neu, 2012). People carrying out all sorts of physical and mental tasks expend less effort when working in groups, and the larger the group, the more they loaf (Karau & Williams, 1993).

Groups can, however, overcome this impediment to performance through **teamwork**. A group may include many talented individuals, but they must learn how to pool their individual abilities and energies to maximize the team's performance. Team goals must be set, work patterns structured, and a sense of group identity developed. Individual members must learn how to coordinate their actions, and any strains and stresses in interpersonal relations need to be identified and resolved (Salas, Rosen, Burke, & Goodwin, 2009).

Researchers have identified two key ingredients to effective teamwork: a shared mental representation of the task and group unity. Teams improve their performance over time as they develop a shared understanding of the team and the tasks they are attempting. Some semblance of this **shared mental model** is present nearly from its inception, but as the team practices, differences among the members in terms of their understanding of their situation and their team diminish as a consensus becomes implicitly accepted (Tindale, Stawiski, & Jacobs, 2008).

Effective teams are also, in most cases, cohesive groups (Dion, 2000). **Group cohesion** is the integrity, solidarity, social integration, or unity of a group. In most cases, members of cohesive groups like each other and the group and they also are united in their pursuit of collective, group-level goals. Members tend to enjoy their groups more when they are cohesive, and cohesive groups usually outperform ones that lack cohesion.

This cohesion-performance relationship, however, is a complex one. Meta-analytic studies suggest that cohesion improves teamwork among members, but that performance quality

influences cohesion more than cohesion influences performance (Mullen & Copper, 1994; Mullen, Driskell, & Salas, 1998; see Figure 3). Cohesive groups also can be spectacularly unproductive if the group's norms stress low productivity rather than high productivity (Seashore, 1954).
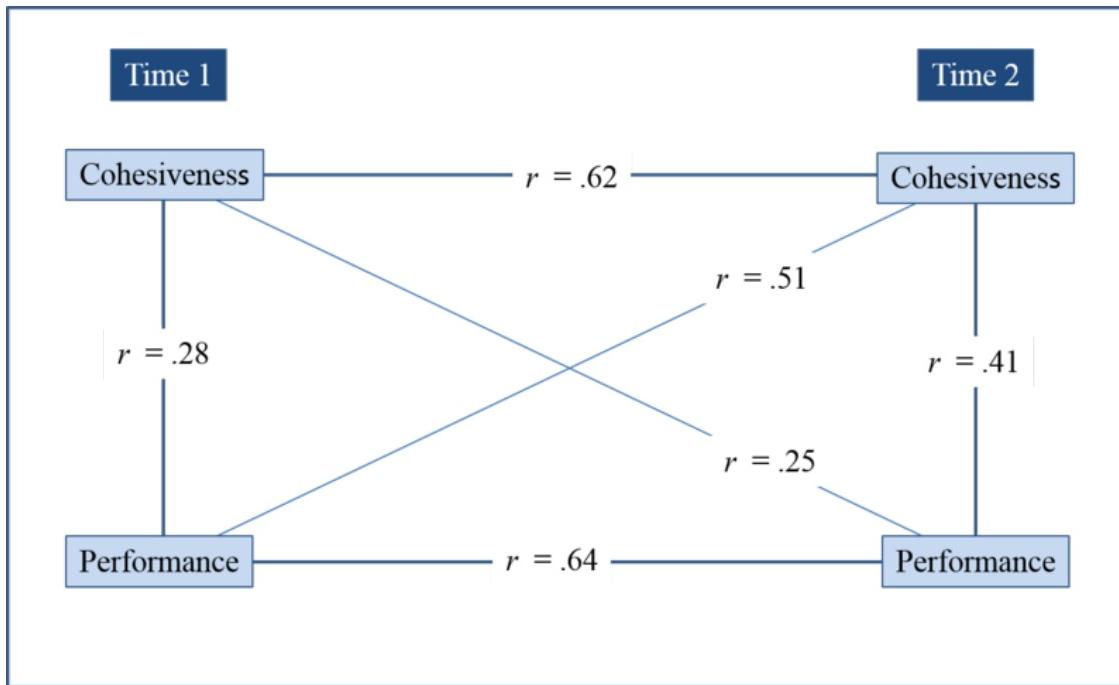

Figure 3: The relationship between group cohesion and performance over time. Groups that are cohesive do tend to perform well on tasks now (Time1) and in the future (Time 2). Notice, though, that the relationship between Performance at Time 1 and Cohesiveness at Time 2 is greater (r=.51) than the relationship between Cohesion at Time 1 and Performance at Time 2 (r=.25). These findings suggest that cohesion improves performance, but that a group that performs well is likely to also become more cohesive. Mullen, Driskell, & Salas (1998)

Group Development

In most cases groups do not become smooth-functioning teams overnight. As Bruce Tuckman's (1965) theory of group development suggests, groups usually pass through several stages of development as they change from a newly formed group into an effective team. As noted in Focus Topic 1, in the *forming* phase, the members become oriented toward one another. In the *storming* phase, the group members find themselves in conflict, and some solution is sought to improve the group environment. In the *norming,* phase standards for behavior and roles develop that regulate behavior. In the *performing,* phase the group has reached a point where it can work as a unit to achieve desired goals, and the *adjourning* phase ends the sequence of development; the group disbands. Throughout these stages groups tend to oscillate between the task-oriented issues and the relationship issues, with members

sometimes working hard but at other times strengthening their interpersonal bonds (Tuckman & Jensen, 1977).

Focus Topic 1: Group Development Stages and Characteristics

Stage 1 – "Forming". Members expose information about themselves in polite but tentative interactions. They explore the purposes of the group and gather information about each other's interests, skills, and personal tendencies.

Stage 2 – "Storming". Disagreements about procedures and purposes surface, so criticism and conflict increase. Much of the conflict stems from challenges between members who are seeking to increase their status and control in the group.

Stage 3 – "Norming". Once the group agrees on its goals, procedures, and leadership, norms, roles, and social relationships develop that increase the group's stability and cohesiveness.

Stage 4 – "Performing". The group focuses its energies and attention on its goals, displaying higher rates of task-orientation, decision-making, and problem-solving.

Stage 5 – "Adjourning". The group prepares to disband by completing its tasks, reduces levels of dependency among members, and dealing with any unresolved issues.

Sources based on Tuckman (1965) and Tuckman & Jensen (1977)

We also experience change as we pass through a group, for we don't become full-fledged members of a group in an instant. Instead, we gradually become a part of the group and remain in the group until we leave it. Richard Moreland and John Levine's (1982) model of group socialization describes this process, beginning with initial entry into the group and ending when the member exits it. For example, when you are thinking of joining a new group —a social club, a professional society, a fraternity or sorority, or a sports team—you investigate what the group has to offer, but the group also investigates you. During this investigation stage you are still an outsider: interested in joining the group, but not yet committed to it in any way. But once the group accepts you and you accept the group, socialization begins: you

learn the group's norms and take on different responsibilities depending on your role. On a sports team, for example, you may initially hope to be a star who starts every game or plays a particular position, but the team may need something else from you. In time, though, the group will accept you as a full-fledged member and both sides in the process—you and the group itself—increase their commitment to one another. When that commitment wanes, however, your membership may come to an end as well.

Making Decisions in Groups

Groups are particularly useful when it comes to making a decision, for groups can draw on more resources than can a lone individual. A single individual may know a great deal about a problem and possible solutions, but his or her information is far surpassed by the combined knowledge of a group. Groups not only generate more ideas and possible solutions by discussing the problem, but they can also more objectively evaluate the options that they generate during discussion. Before accepting a solution, a group may require that a certain number of people favor it, or that it meets some other standard of acceptability. People generally feel that a group's decision will be superior to an individual's decision.

Groups, however, do not always make good decisions. Juries sometimes render verdicts that run counter to the evidence presented. Community groups take radical stances on issues before thinking through all the ramifications. Military strategists concoct plans that seem, in retrospect, ill-conceived and short-sighted. Why do groups sometimes make poor decisions?

Group Polarization

Let's say you are part of a group assigned to make a presentation. One of the group members suggests showing a short video that, although amusing, includes some provocative images. Even though initially you think the clip is inappropriate, you begin to change your mind as the group discusses the idea. The group decides, eventually, to throw caution to the wind and show the clip—and your instructor is horrified by your choice.

This hypothetical example is consistent with studies of groups making decisions that involve risk. Common sense notions suggest that groups exert a moderating, subduing effect on their members. However, when researchers looked at groups closely, they discovered many groups shift toward more extreme decisions rather than less extreme decisions after group interaction. Discussion, it turns out, doesn't moderate people's judgments after all. Instead, it leads to **group polarization**: judgments made after group discussion will be more extreme in the same direction as the average of individual judgments made prior to discussion (Myers

& Lamm, 1976). If a majority of members feel that taking risks is more acceptable than exercising caution, then the group will become riskier after a discussion. For example, in France, where people generally like their government but dislike Americans, group discussion improved their attitude toward their government but exacerbated their negative opinions of Americans (Moscovici & Zavalloni, 1969). Similarly, prejudiced people who discussed racial issues with other prejudiced individuals became even more negative, but those who were relatively unprejudiced exhibited even more acceptance of diversity when in groups (Myers & Bishop, 1970).

Common Knowledge Effect

One of the advantages of making decisions in groups is the group's greater access to information. When seeking a solution to a problem, group members can put their ideas on the table and share their knowledge and judgments with each other through discussions. But all too often groups spend much of their discussion time examining common knowledge—information that two or more group members know in common—rather than unshared information. This common knowledge effect will result in a bad outcome if something known by only one or two group members is very important.

Researchers have studied this bias using the *hidden profile task*. On such tasks, information known to many of the group members suggests that one alternative, say Option A, is best. However, Option B is definitely the better choice, but all the facts that support Option B are only known to individual groups members—they are not common knowledge in the group. As a result, the group will likely spend most of its time reviewing the factors that favor Option A, and never discover any of its drawbacks. In consequence, groups often perform poorly when working on problems with nonobvious solutions that can only be identified by extensive information sharing (Stasser & Titus, 1987).

Groupthink

Groupthink helps us blend in and feel accepted and validated but it can also lead to problems. [Image: CC0 Public Domain, https://goo.gl/m25gce]

Groups sometimes make spectacularly bad decisions. In 1961, a special advisory committee to President John F. Kennedy planned and implemented a covert invasion of Cuba at the Bay of Pigs that ended in total disaster. In 1986, NASA carefully, and incorrectly, decided to launch the Challenger space shuttle in temperatures that were too cold.

Irving Janis (1982), intrigued by these kinds of blundering groups, carried out a number of case studies of such groups: the military experts that planned the defense of Pearl Harbor; Kennedy's Bay of Pigs planning group; the presidential team that escalated the war in Vietnam. Each group, he concluded, fell prey to a distorted style of thinking that rendered the group members incapable of making a rational decision. Janis labeled this syndrome **groupthink**: "a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action" (p. 9).

Janis identified both the telltale symptoms that signal the group is experiencing groupthink and the interpersonal factors that combine to cause groupthink. To Janis, groupthink is a disease that infects healthy groups, rendering them inefficient and unproductive. And like the physician who searches for symptoms that distinguish one disease from another, Janis identified a number of symptoms that should serve to warn members that they may be falling prey to groupthink. These symptoms include overestimating the group's skills and wisdom, biased perceptions and evaluations of other groups and people who are outside of the group, strong conformity pressures within the group, and poor decision-making methods.

Janis also singled out four group-level factors that combine to cause groupthink: cohesion, isolation, biased leadership, and decisional stress.

- *Cohesion*: Groupthink only occurs in cohesive groups. Such groups have many advantages over groups that lack unity. People enjoy their membership much more in cohesive groups, they are less likely to abandon the group, and they work harder in pursuit of the group's goals. But extreme cohesiveness can be dangerous. When cohesiveness intensifies, members become more likely to accept the goals, decisions, and norms of the group without reservation. Conformity pressures also rise as members become reluctant to say or do anything that goes against the grain of the group, and the number of internal disagreements—necessary for good decision making—decreases.

- *Isolation.* Groupthink groups too often work behind closed doors, keeping out of the limelight. They isolate themselves from outsiders and refuse to modify their beliefs to bring them into line with society's beliefs. They avoid leaks by maintaining strict confidentiality and working only with people who are members of their group.

- *Biased leadership*. A biased leader who exerts too much authority over group members can increase conformity pressures and railroad decisions. In groupthink groups, the leader determines the agenda for each meeting, sets limits on discussion, and can even decide who will be heard.

- *Decisional stress.* Groupthink becomes more likely when the group is stressed, particularly by time pressures. When groups are stressed they minimize their discomfort by quickly choosing a plan of action with little argument or dissension. Then, through collective discussion, the group members can rationalize their choice by exaggerating the positive consequences, minimizing the possibility of negative outcomes, concentrating on minor details, and overlooking larger issues.

You and Your Groups

Even groups that like one another and work well together in most situations can be victims of groupthink or the common knowledge effect. But knowing that these pitfalls exist is the first step to overcoming them. [Image: CC0 Public Domain, https://goo.gl/m25gce]

Most of us belong to at least one group that must make decisions from time to time: a community group that needs to choose a fund-raising project; a union or employee group that must ratify a new contract; a family that must discuss your college plans; or the staff of a high school discussing ways to deal with the potential for violence during football games. Could these kinds of groups experience groupthink? Yes they could, if the symptoms of groupthink discussed above are present, combined with other contributing causal factors, such as cohesiveness, isolation, biased leadership, and stress. To avoid polarization, the common knowledge effect, and groupthink, groups should strive to emphasize open inquiry of all sides of the issue while admitting the possibility of failure. The leaders of the group can also do much to limit groupthink by requiring full discussion of pros and cons, appointing devil's advocates, and breaking the group up into small discussion groups.

If these precautions are taken, your group has a much greater chance of making an informed, rational decision. Furthermore, although your group should review its goals, teamwork, and decision-making strategies, the human side of groups—the strong friendships and bonds that

make group activity so enjoyable—shouldn't be overlooked. Groups have instrumental, practical value, but also emotional, psychological value. In groups we find others who appreciate and value us. In groups we gain the support we need in difficult times, but also have the opportunity to influence others. In groups we find evidence of our self-worth, and secure ourselves from the threat of loneliness and despair. For most of us, groups are the secret source of well-being.

Outside Resources

Audio: This American Life. Episode 109 deals with the motivation and excitement of joining with others at summer camp.
http://www.thisamericanlife.org/radio-archives/episode/109/notes-on-camp

Audio: This American Life. Episode 158 examines how people act when they are immersed in a large crowd.
http://www.thisamericanlife.org/radio-archives/episode/158/mob-mentality

Audio: This American Life. Episode 61 deals with fiascos, many of which are perpetrated by groups.
http://www.thisamericanlife.org/radio-archives/episode/61/fiasco

Audio: This American Life. Episode 74 examines how individuals act at conventions, when they join with hundreds or thousands of other people who are similar in terms of their avocations or employment.
http://www.thisamericanlife.org/radio-archives/episode/74/conventions

Forsyth, D. (2011). Group Dynamics. In R. Miller, E. Balcetis, S. Burns, D. Daniel, B. Saville, & W. Woody (Eds.), Promoting student engagement: Volume 2: Activities, exercises and demonstrations for psychology courses. (pp. 28-32) Washington, DC: Society for the Teaching of Psychology, American Psychological Association.
http://teachpsych.org/ebooks/pse2011/vol2/index.php

Forsyth, D.R. (n.d.) Group Dynamics: Instructional Resources.
https://facultystaff.richmond.edu/~dforsyth/gd/GDResources2014.pdf

Journal Article: The Dynamogenic Factors in Pacemaking and Competition presents Norman Triplett's original paper on what would eventually be known as social facilitation.
http://psychclassics.yorku.ca/Triplett/

Resources for the Teaching of Social Psychology.
http://jfmueller.faculty.noctrl.edu/crow/group.htm

Social Psychology Network Student Activities
http://www.socialpsychology.org/teaching.htm#student-activities

Society for Social and Personality Psychology
http://www.spsp.org

Tablante, C. B., & Fiske, S. T. (2015). Teaching social class. Teaching of Psychology, 42, 184-190. doi:10.1177/0098628315573148 The abstract to the article can be found at the following link, however your library will likely provide you access to the full text version.
http://top.sagepub.com/content/42/2/184.abstract

Video: Flash mobs illustrate the capacity of groups to organize quickly and complete complex tasks. One well-known example of a pseudo-flash mob is the rendition of "Do Re Mi" from the Sound of Music in the Central Station of Antwerp in 2009.
https://www.youtube.com/watch?v=7EYAUazLI9k

Web: Group Development - This is a website developed by James Atherton that provides detailed information about group development, with application to the lifecycle of a typical college course.
http://www.learningandteaching.info/teaching/group_ development.htm

Web: Group Dynamics- A general repository of links, short articles, and discussions examining groups and group processes, including such topics as crowd behavior, leadership, group structure, and influence.
http://donforsythgroups.wordpress.com/

Web: Stanford Crowd Project - This is a rich resource of information about all things related to crowds, with a particular emphasis on crowds and collective behavior in literature and the arts.
http://press-media.stanford.edu/crowds/main.html

Working Paper: Law of Group Polarization, by Cass Sunstein, is a wide-ranging application of the concept of polarization to a variety of legal and political decisions.
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=199668

Discussion Questions

1. What are the advantages and disadvantages of sociality? Why do people often join groups?

2. Is self-esteem shaped by your personality qualities or by the value and qualities of groups to which you belong?

3. In what ways does membership in a group change a person's self-concept and social identity?

4. What steps would you take if you were to base a self-esteem enrichment program in schools on the sociometer model of self-worth?

5. If you were a college professor, what would you do to increase the success of in-class learning teams?

6. What are the key ingredients to transforming a working group into a true team?

7. Have you ever been part of a group that made a poor decision and, if so, were any of the symptoms of groupthink present in your group?

Vocabulary

Collective self-esteem
Feelings of self-worth that are based on evaluation of relationships with others and membership in social groups.

Common knowledge effect
The tendency for groups to spend more time discussing information that all members know (shared information) and less time examining information that only a few members know (unshared).

Group cohesion
The solidarity or unity of a group resulting from the development of strong and mutual interpersonal bonds among members and group-level forces that unify the group, such as shared commitment to group goals.

Group polarization
The tendency for members of a deliberating group to move to a more extreme position, with the direction of the shift determined by the majority or average of the members' predeliberation preferences.

Groupthink
A set of negative group-level processes, including illusions of invulnerability, self-censorship, and pressures to conform, that occur when highly cohesive groups seek concurrence when making a decision.

Ostracism
Excluding one or more individuals from a group by reducing or eliminating contact with the person, usually by ignoring, shunning, or explicitly banishing them.

Shared mental model
Knowledge, expectations, conceptualizations, and other cognitive representations that members of a group have in common pertaining to the group and its members, tasks, procedures, and resources.

Social comparison
The process of contrasting one's personal qualities and outcomes, including beliefs, attitudes, values, abilities, accomplishments, and experiences, to those of other people.

Social facilitation
Improvement in task performance that occurs when people work in the presence of other people.

Social identity theory
A theoretical analysis of group processes and intergroup relations that assumes groups influence their members' self-concepts and self-esteem, particularly when individuals categorize themselves as group members and identify with the group.

Social loafing
The reduction of individual effort exerted when people work in groups compared with when they work alone.

Sociometer model
A conceptual analysis of self-evaluation processes that theorizes self-esteem functions to psychologically monitor of one's degree of inclusion and exclusion in social groups.

Teamwork
The process by which members of the team combine their knowledge, skills, abilities, and other resources through a coordinated series of actions to produce an outcome.

References

Allport, F. H. (1924). *Social psychology*. Boston: Houghton Mifflin.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*, 497–529.

Blascovich, J., Mendes, W. B., Hunter, S. B., & Salomon, K. (1999). Social "facilitation" as challenge and threat. *Journal of Personality and Social Psychology, 77*, 68–77.

Bond, C. F., Atoum, A. O., & VanLeeuwen, M. D. (1996). Social impairment of complex learning in the wake of public embarrassment. *Basic and Applied Social Psychology, 18*, 31–44.

Buote, V. M., Pancer, S. M., Pratt, M. W., Adams, G., Birnie-Lefcovitch, S., Polivy, J., & Wintre, M. G. (2007). The importance of friends: Friendship and adjustment among 1st-year university students. *Journal of Adolescent Research, 22(6)*, 665–689.

Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology, 58*, 60–67.

Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review, 96*, 608–630.

Darwin, C. (1859/1963). *The origin of species*. New York: Washington Square Press.

Dashiell, J. F. (1930). An experimental analysis of some group effects. *Journal of Abnormal and Social Psychology, 25*, 190–199.

Davis, J. A., & Smith, T. W. (2007). *General social surveys (1972–2006)*. [machine-readable data file]. Chicago: National Opinion Research Center & Storrs, CT: The Roper Center for Public Opinion Research. Retrieved from http://www.norc.uchicago.edu

Diehl, M., & Stroebe, W. (1987). Productivity loss in brainstorming groups: Toward the solution of a riddle. *Journal of Personality and Social Psychology, 53*, 497–509.

Dion, K. L. (2000). Group cohesion: From "field of forces" to multidimensional construct. *Group Dynamics: Theory, Research, and Practice, 4*, 7–26.

Eisenberger, N. I., Lieberman, M. D., & Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science, 302*, 290–292.

Emerson, R. W. (2004). *Essays and poems by Ralph Waldo Emerson*. New York: Barnes & Noble. (originally published 1903).

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117–140.

Festinger, L. (1950). Informal social communication. *Psychological Review, 57*, 271–282.

George, J. M. (1992). Extrinsic and intrinsic origins of perceived social loafing in organizations.

Academy of Management Journal, 35, 191–202.

Harkins, S. G. (2006). Mere effort as the mediator of the evaluation-performance relationship. *Journal of Personality and Social Psychology, 91(3)*, 436–455.

Hogg, M. A. (2001). Social categorization, depersonalization, and group behavior. In M. A. Hogg & R. S. Tindale (Eds.), *Blackwell handbook of social psychology: Group processes* (pp. 56–85). Malden, MA: Blackwell.

Huguet, P., Galvaing, M. P., Monteil, J. M., & Dumas, F. (1999). Social presence effects in the Stroop task: Further evidence for an attentional view of social facilitation. *Journal of Personality and Social Psychology, 77*, 1011–1025.

Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascos* (2nd ed.). Boston: Houghton Mifflin.

Karau, S. J., & Williams, K. D. (1993). Social loafing: A meta-analytic review and theoretical integration. *Journal of Personality and Social Psychology, 65*, 681–706.

Latané, B. (1981). The psychology of social impact. *American Psychologist, 36*, 343–356.

Latané, B., Williams, K., & Harkins, S. (1979). Many hands make light the work: The causes and consequences of social loafing. *Journal of Personality and Social Psychology, 37*, 822–832.

Leary, M. R. (2007). Motivational and emotional aspects of the self. *Annual Review of Psychology, 58*, 317–344.

Leary, M. R. & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. *Advances in Experimental Social Psychology, 32*, 1–62.

Littlepage, G. E. (1991). Effects of group size and task characteristics on group performance: A test of Steiner's model. *Personality and Social Psychology Bulletin, 17*, 449–456.

Moreland, R. L. (1987). The formation of small groups. *Review of Personality and Social Psychology, 8*, 80–110.

Moreland, R. L., & Levine, J. M. (1982). Socialization in small groups: Temporal changes in individual-group relations. *Advances in Experimental Social Psychology, 15*, 137–192.

Moscovici, S., & Zavalloni, M. (1969). The group as a polarizer of attitudes. *Journal of Personality and Social Psychology, 12*, 125–135.

Mullen, B., & Copper, C. (1994). The relation between group cohesiveness and performance: An integration. *Psychological Bulletin, 115*, 210–227.

Mullen, B., Driskell, J. E., & Salas, E. (1998). Meta-analysis and the study of group dynamics. *Group Dynamics: Theory, Research, and Practice, 2*, 213–229.

Myers, D. G., & Bishop, G. D. (1970). Discussion effects on racial attitudes. *Science, 169*, 778–789.

Myers, D. G., & Lamm, H. (1976). The group polarization phenomenon. *Psychological Bulletin, 83*, 602–627.

Neu, W. A. (2012). Unintended cognitive, affective, and behavioral consequences of group assignments. *Journal of Marketing Education, 34*(1), 67–81.

Paulus, P. B., & Brown, V. R. (2007). Toward more creative and innovative group idea generation: A cognitive-social-motivational perspective of brainstorming. *Social and Personality Psychology Compass, 1*, 248–265.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Salas, E., Rosen, M. A., Burke, C. S., & Goodwin, G. F. (2009). The wisdom of collectives in organizations: An update of the teamwork competencies. In E. Salas, G. F. Goodwin, & C. S. Burke (Eds.), *Team effectiveness in complex organizations: Cross-disciplinary perspectives and approaches* (pp. 39–79). New York: Routledge/Taylor & Francis Group.

Schachter, S. (1959). *The psychology of affiliation*. Stanford, CA: Stanford University Press.

Seashore, S. E. (1954). *Group cohesiveness in the industrial work group*. Ann Arbor, MI: Institute for Social Research.

Stasser, G., & Titus, W. (1987). Effects of information load and percentage of shared information on the dissemination of unshared information during group discussion. *Journal of Personality and Social Psychology, 53*, 81–93.

Steiner, I. D. (1972). *Group process and productivity*. New York: Academic Press.

Stroebe, W. (2012). The truth about Triplett (1898), but nobody seems to care. *Perspectives on Psychological Science, 7*(1), 54–57.

Strube, M. J. (2005). What did Triplett really find? A contemporary analysis of the first experiment in social psychology. *American Journal of Psychology, 118*, 271–286.

Tindale, R. S., Stawiski, S., & Jacobs, E. (2008). Shared cognition and group learning. In V. I. Sessa & M. London (Eds.), *Work group learning: Understanding, improving and assessing how groups learn in organizations* (pp. 73–90). New York: Taylor & Francis Group.

Triplett, N. (1898). The dynamogenic factors in pacemaking and competition. *American Journal of Psychology, 9*, 507–533.

Tuckman, B. W. (1965). Developmental sequences in small groups. *Psychological Bulletin, 63*, 384–399.

Tuckman, B. W., & Jensen, M. A. C. (1977). Stages of small group development revisited. *Group and Organizational Studies, 2*, 419–427.

Williams, K. D. (2007). Ostracism. *Annual Review of Psychology, 58*, 425–452.

Zajonc, R. B. (1965). Social facilitation. *Science, 149*, 269–274.

Human Development

9
The Nature-Nurture Question

Eric Turkheimer

People have a deep intuition about what has been called the "nature–nurture question." Some aspects of our behavior feel as though they originate in our genetic makeup, while others feel like the result of our upbringing or our own hard work. The scientific field of behavior genetics attempts to study these differences empirically, either by examining similarities among family members with different degrees of genetic relatedness, or, more recently, by studying differences in the DNA of people with different behavioral traits. The scientific methods that have been developed are ingenious, but often inconclusive. Many of the difficulties encountered in the empirical science of behavior genetics turn out to be conceptual, and our intuitions about nature and nurture get more complicated the harder we think about them. In the end, it is an oversimplification to ask how "genetic" some particular behavior is. Genes and environments always combine to produce behavior, and the real science is in the discovery of how they combine for a given behavior.

Learning Objectives

- Understand what the nature–nurture debate is and why the problem fascinates us.
- Understand why nature–nurture questions are difficult to study empirically.
- Know the major research designs that can be used to study nature–nurture questions.
- Appreciate the complexities of nature–nurture and why questions that seem simple turn out not to have simple answers.

Introduction

There are three related problems at the intersection of philosophy and science that are fundamental to our understanding of our relationship to the natural world: the mind–body problem, the free will problem, and the nature–nurture problem. These great questions have a lot in common. Everyone, even those without much knowledge of science or philosophy, has opinions about the answers to these questions that come simply from observing the world we live in. Our feelings about our relationship with the physical and biological world often seem incomplete. We are in control of our actions in some ways, but at the mercy of our bodies in others; it feels obvious that our consciousness is some kind of creation of our physical brains, at the same time we sense that our awareness must go beyond just the physical. This incomplete knowledge of our relationship with nature leaves us fascinated and a little obsessed, like a cat that climbs into a paper bag and then out again, over and over, mystified every time by a relationship between inner and outer that it can see but can't quite understand.

It may seem obvious that we are born with certain characteristics while others are acquired, and yet of the three great questions about humans' relationship with the natural world, only nature–nurture gets referred to as a "debate." In the history of psychology, no other question has caused so much controversy and offense: We are so concerned with nature–nurture because our very sense of moral character seems to depend on it. While we may admire the athletic skills of a great basketball player, we think of his height as simply a gift, a payoff in the "genetic lottery." For the same reason, no one blames a short person for his height or someone's congenital disability on poor decisions: To state the obvious, it's "not their fault." But we do praise the concert violinist (and perhaps her parents and teachers as well) for her dedication, just as we condemn cheaters, slackers, and bullies for their bad behavior.

The problem is, most human characteristics aren't usually as clear-cut as height or instrument-mastery, affirming our nature–nurture expectations strongly one way or the other. In fact, even the great violinist might have some inborn qualities—perfect pitch, or long, nimble fingers—that support and reward her hard work. And the basketball player might have eaten a diet while growing up that promoted his genetic tendency for being tall. When we think about our own qualities, they seem under our control in some respects, yet beyond our control in others. And often the traits that don't seem to have an obvious cause are the ones that concern us the most and are far more personally significant. What about how much we drink or worry? What about our honesty, or religiosity, or sexual orientation? They all come from that uncertain zone, neither fixed by nature nor totally under our own control.

One major problem with answering nature-nurture questions about people is, how do you set up an experiment? In nonhuman animals, there are relatively straightforward experiments for tackling nature–nurture questions. Say, for example, you are interested in aggressiveness

Researchers have learned a great deal about the nature-nurture dynamic by working with animals. But of course many of the techniques used to study animals cannot be applied to people. Separating these two influences in human subjects is a greater research challenge. [Image: Sebastián Dario, https://goo.gl/OPiIWd, CC BY-NC 2.0, https://goo.gl/FIlc2e]

in dogs. You want to test for the more important determinant of aggression: being born to aggressive dogs or being raised by them. You could mate two aggressive dogs—angry Chihuahuas— together, and mate two nonaggressive dogs—happy beagles—together, then switch half the puppies from each litter between the different sets of parents to raise. You would then have puppies born to aggressive parents (the Chihuahuas) but being raised by nonaggressive parents (the Beagles), and vice versa, in litters that mirror each other in puppy distribution. The big questions are: Would the Chihuahua parents raise aggressive beagle puppies? Would the beagle parents raise *non*aggressive Chihuahua puppies? Would the puppies' *nature* win out, regardless of who raised them? Or... would the result be a combination of nature *and* nurture? Much of the most significant nature–nurture research has been done in this way (Scott & Fuller, 1998), and animal breeders have been doing it successfully for thousands of years. In fact, it is fairly easy to breed animals for behavioral traits.

With people, however, we can't assign babies to parents at random, or select parents with certain behavioral characteristics to mate, merely in the interest of science (though history does include horrific examples of such practices, in misguided attempts at "eugenics," the shaping of human characteristics through intentional breeding). In typical human families, children's biological parents raise them, so it is very difficult to know whether children act like their parents due to genetic (nature) or environmental (nurture) reasons. Nevertheless, despite our restrictions on setting up human-based experiments, we do see real-world examples of nature-nurture at work in the human sphere—though they only provide partial answers to our many questions.

The science of how genes and environments work together to influence behavior is called **behavioral genetics**. The easiest opportunity we have to observe this is the **adoption study**. When children are put up for adoption, the parents who give birth to them are no longer the parents who raise them. This setup isn't quite the same as the experiments with dogs (children

aren't assigned to random adoptive parents in order to suit the particular interests of a scientist) but adoption still tells us some interesting things, or at least confirms some basic expectations. For instance, if the biological child of tall parents were adopted into a family of short people, do you suppose the child's growth would be affected? What about the biological child of a Spanish-speaking family adopted at birth into an English-speaking family? What language would you expect the child to speak? And what might these outcomes tell you about the difference between height and language in terms of nature-nurture?

Another option for observing nature-nurture in humans involves twin studies. There are two types of twins: monozygotic (MZ) and dizygotic (DZ). Monozygotic twins, also called "identical" twins, result from a single zygote (fertilized egg) and have the same DNA. They are essentially clones. Dizygotic twins, also known as "fraternal" twins, develop from two zygotes and share 50% of their DNA. Fraternal twins are ordinary siblings who happen to have been born at the same time. To analyze nature–nurture using twins, we compare the similarity of MZ and DZ pairs. Sticking with the features of height and spoken language, let's take a look at how nature and nurture apply: Identical twins, unsurprisingly, are almost perfectly similar for height. The heights of fraternal twins, however, are like any other sibling pairs: more similar to each

Studies focused on twins have led to important insights about the biological origins of many personality characteristics.

other than to people from other families, but hardly identical. This contrast between twin types gives us a clue about the role genetics plays in determining height. Now consider spoken language. If one identical twin speaks Spanish at home, the co-twin with whom she is raised almost certainly does too. But the same would be true for a pair of fraternal twins raised together. In terms of spoken language, fraternal twins are just as similar as identical twins, so it appears that the genetic match of identical twins doesn't make much difference.

Twin and adoption studies are two instances of a much broader class of methods for observing nature-nurture called quantitative genetics, the scientific discipline in which similarities among individuals are analyzed based on how biologically related they are. We can do these studies with siblings and half-siblings, cousins, twins who have been separated at birth and

raised separately (Bouchard, Lykken, McGue, & Segal, 1990; such twins are very rare and play a smaller role than is commonly believed in the science of nature–nurture), or with entire extended families (see Plomin, DeFries, Knopik, & Neiderhiser, 2012, for a complete introduction to research methods relevant to nature–nurture).

For better or for worse, contentions about nature–nurture have intensified because quantitative genetics produces a number called a **heritability coefficient**, varying from 0 to 1, that is meant to provide a single measure of genetics' influence of a trait. In a general way, a heritability coefficient measures how strongly differences among individuals are related to differences among their genes. But beware: Heritability coefficients, although simple to compute, are deceptively difficult to interpret. Nevertheless, numbers that provide simple answers to complicated questions tend to have a strong influence on the human imagination, and a great deal of time has been spent discussing whether the heritability of intelligence or personality or depression is equal to one number or another.

One reason nature–nurture continues to fascinate us so much is that we live in an era of great scientific discovery in genetics, comparable to the times of Copernicus, Galileo, and Newton, with regard to astronomy and physics. Every day, it seems, new discoveries are made, new possibilities proposed. When Francis Galton first started thinking about nature–nurture in the late-19th century he was very influenced by his cousin, Charles Darwin, but genetics *per se* was unknown. Mendel's famous work with peas, conducted at about the same time, went undiscovered for 20 years; quantitative genetics was developed in the 1920s; DNA was discovered by Watson and Crick in the 1950s; the human genome was completely sequenced at the turn of the 21st century; and we are now on the verge of being able to obtain the specific DNA sequence of anyone at a relatively low cost. No one knows what

Quantitative genetics uses statistical methods to study the effects that both heredity and environment have on test subjects. These methods have provided us with the heritability coefficient which measures how strongly differences among individuals for a trait are related to differences among their genes. [Image: EMSL, https://goo.gl/IRfn9g, CC BY-NC-SA 2.0, https://goo.gl/fbv27n]

this new genetic knowledge will mean for the study of nature–nurture, but as we will see in the next section, answers to nature–nurture questions have turned out to be far more difficult and mysterious than anyone imagined.

What Have We Learned About Nature–Nurture?

It would be satisfying to be able to say that nature–nurture studies have given us conclusive and complete evidence about where traits come from, with some traits clearly resulting from genetics and others almost entirely from environmental factors, such as childrearing practices and personal will; but that is not the case. Instead, *everything* has turned out to have some footing in genetics. The more genetically-related people are, the more similar they are—for *everything*: height, weight, intelligence, personality, mental illness, etc. Sure, it seems like common sense that some traits have a genetic bias. For example, adopted children resemble their biological parents even if they have never met them, and identical twins are more similar to each other than are fraternal twins. And while certain psychological traits, such as personality or mental illness (e.g., schizophrenia), seem reasonably influenced by genetics, it turns out that the same is true for political attitudes, how much television people watch (Plomin, Corley, DeFries, & Fulker, 1990), and whether or not they get divorced (McGue & Lykken, 1992).

Research over the last half century has revealed how central genetics are to behavior. The more genetically related people are the more similar they are not just physically but also in terms of personality and behavior. [Image: Paul Altobelli, https://goo.gl/SWLwm2, CC BY 2.0, https://goo.gl/9uSnqN]

It may seem surprising, but genetic influence on behavior is a relatively recent discovery. In the middle of the 20th century, psychology was dominated by the doctrine of behaviorism, which held that behavior could only be explained in terms of environmental factors. Psychiatry concentrated on psychoanalysis, which probed for roots of behavior in individuals' early life-histories. The truth is, neither behaviorism nor psychoanalysis is incompatible with genetic influences on behavior, and neither Freud nor Skinner was naive about the importance of organic processes in behavior. Nevertheless, in their day it was widely thought that children's personalities were shaped entirely by imitating their parents' behavior, and that schizophrenia was caused by certain kinds of "pathological mothering." Whatever the outcome of our broader discussion of nature–nurture, the basic

fact that the best predictors of an adopted child's personality or mental health are found in the biological parents he or she has never met, rather than in the adoptive parents who raised him or her, presents a significant challenge to purely environmental explanations of personality or psychopathology. The message is clear: You can't leave genes out of the equation. But keep in mind, no behavioral traits are completely inherited, so you can't leave the environment out altogether, either.

Trying to untangle the various ways nature-nurture influences human behavior can be messy, and often common-sense notions can get in the way of good science. One very significant contribution of behavioral genetics that has changed psychology for good can be very helpful to keep in mind: When your subjects are biologically-related, no matter how clearly a situation may seem to point to environmental influence, it is never safe to interpret a behavior as wholly the result of nurture without further evidence. For example, when presented with data showing that children whose mothers read to them often are likely to have better reading scores in third grade, it is tempting to conclude that reading to your kids out loud is important to success in school; this may well be true, but the study as described is inconclusive, because there are genetic *as well as* environmental pathways between the parenting practices of mothers and the abilities of their children. This is a case where "correlation does not imply causation," as they say. To establish that reading aloud causes success, a scientist can either study the problem in adoptive families (in which the genetic pathway is absent) or by finding a way to randomly assign children to oral reading conditions.

The outcomes of nature–nurture studies have fallen short of our expectations (of establishing clear-cut bases for traits) in many ways. The most disappointing outcome has been the inability to organize traits from *more-* to *less*-genetic. As noted earlier, everything has turned out to be at least *somewhat* heritable (passed down), yet nothing has turned out to be *absolutely* heritable, and there hasn't been much consistency as to which traits are *more* heritable and which are *less* heritable once other considerations (such as how accurately the trait can be measured) are taken into account (Turkheimer, 2000). The problem is conceptual: The heritability coefficient, and, in fact, the whole quantitative structure that underlies it, does not match up with our nature–nurture intuitions. We want to know how "important" the roles of genes and environment are to the development of a trait, but in focusing on "important" maybe we're emphasizing the wrong thing. First of all, genes and environment are both crucial to *every* trait; without genes the environment would have nothing to work on, and too, genes cannot develop in a vacuum. Even more important, because nature–nurture questions look at the differences among people, the cause of a given trait depends not only on the trait itself, but also on the differences in that trait between members of the group being studied.

The classic example of the heritability coefficient defying intuition is the trait of having two

arms. No one would argue against the development of arms being a biological, genetic process. But fraternal twins are just as similar for "two-armedness" as identical twins, resulting in a heritability coefficient of zero for the trait of having two arms. Normally, according to the heritability model, this result (coefficient of zero) would suggest all nurture, no nature, but we know that's not the case. The reason this result is not a tip-off that arm development is less genetic than we imagine is because people *do not vary* in the genes related to arm development—which essentially upends the heritability formula. In fact, in this instance, the opposite is likely true: the extent that people differ in arm number is likely the result of accidents and, therefore, environmental. For reasons like these, we always have to be very careful when asking nature–nurture questions, especially when we try to express the answer in terms of a single number. The heritability of a trait is not simply a property of that trait, but a property of the trait in a particular context of relevant genes and environmental factors.

Another issue with the heritability coefficient is that it divides traits' determinants into two portions—genes and environment—which are then calculated together for the total variability. This is a little like asking how much of the experience of a symphony comes from the horns and how much from the strings; the ways instruments or genes integrate is more complex than that. It turns out to be the case that, for many traits, genetic differences affect behavior under some environmental circumstances but not others—a phenomenon called gene-environment interaction, or G x E. In one well-known example, Caspi et al. (2002) showed that among maltreated children, those who carried a particular allele of the MAOA gene showed a predisposition to violence and antisocial behavior, while those with other alleles did not. Whereas, in children who had not been maltreated, the gene had no effect. Making matters even more complicated are very recent studies of what is known as epigenetics (see module, "Epigenetics" http://noba.to/37p5cb8v), a process in which the DNA itself is modified by environmental events, and those genetic changes transmitted to children.

The answer to the nature –nurture question has not turned out to be as straightforward as we would like. The many questions we can ask about the relationships among genes, environments, and human traits may have many different answers, and the answer to one tells us little about the answers to the others. [Image: Sundaram Ramaswamy, https://goo.gl/Bv8lp6, CC BY 2.0, https://goo.gl/9uSnqN]

Some common questions about nature–nurture are, how susceptible is a trait to

change, how malleable is it, and do we "have a choice" about it? These questions are much more complex than they may seem at first glance. For example, phenylketonuria is an inborn error of metabolism caused by a single gene; it prevents the body from metabolizing phenylalanine. Untreated, it causes intellectual disability and death. But it can be treated effectively by a straightforward environmental intervention: avoiding foods containing phenylalanine. Height seems like a trait firmly rooted in our nature and unchangeable, but the average height of many populations in Asia and Europe has increased significantly in the past 100 years, due to changes in diet and the alleviation of poverty. Even the most modern genetics has not provided definitive answers to nature–nurture questions. When it was first becoming possible to measure the DNA sequences of individual people, it was widely thought that we would quickly progress to finding the specific genes that account for behavioral characteristics, but that hasn't happened. There are a few rare genes that have been found to have significant (almost always negative) effects, such as the single gene that causes Huntington's disease, or the Apolipoprotein gene that causes early onset dementia in a small percentage of Alzheimer's cases. Aside from these rare genes of great effect, however, the genetic impact on behavior is broken up over many genes, each with very small effects. For most behavioral traits, the effects are so small and distributed across so many genes that we have not been able to catalog them in a meaningful way. In fact, the same is true of environmental effects. We know that extreme environmental hardship causes catastrophic effects for many behavioral outcomes, but fortunately extreme environmental hardship is very rare. Within the normal range of environmental events, those responsible for differences (e.g., why some children in a suburban third-grade classroom perform better than others) are much more difficult to grasp.

The difficulties with finding clear-cut solutions to nature–nurture problems bring us back to the other great questions about our relationship with the natural world: the mind-body problem and free will. Investigations into what we mean when we say we are aware of something reveal that consciousness is not simply the product of a particular area of the brain, nor does choice turn out to be an orderly activity that we can apply to some behaviors but not others. So it is with nature and nurture: What at first may seem to be a straightforward matter, able to be indexed with a single number, becomes more and more complicated the closer we look. The many questions we can ask about the intersection among genes, environments, and human traits—how sensitive are traits to environmental change, and how common are those influential environments; are parents or culture more relevant; how sensitive are traits to differences in genes, and how much do the relevant genes vary in a particular population; does the trait involve a single gene or a great many genes; is the trait more easily described in genetic or more-complex behavioral terms?—may have different answers, and the answer to one tells us little about the answers to the others.

It is tempting to predict that the more we understand the wide-ranging effects of genetic differences on all human characteristics—especially behavioral ones—our cultural, ethical, legal, and personal ways of thinking about ourselves will have to undergo profound changes in response. Perhaps criminal proceedings will consider genetic background. Parents, presented with the genetic sequence of their children, will be faced with difficult decisions about reproduction. These hopes or fears are often exaggerated. In some ways, our thinking may need to change—for example, when we consider the meaning behind the fundamental American principle that all men are created equal. Human beings differ, and like all evolved organisms they differ genetically. The Declaration of Independence predates Darwin and Mendel, but it is hard to imagine that Jefferson—whose genius encompassed botany as well as moral philosophy—would have been alarmed to learn about the genetic diversity of organisms. One of the most important things modern genetics has taught us is that almost all human behavior is too complex to be nailed down, even from the most complete genetic information, unless we're looking at identical twins. The science of nature and nurture has demonstrated that genetic differences among people are vital to human moral equality, freedom, and self-determination, not opposed to them. As Mordecai Kaplan said about the role of the past in Jewish theology, genetics gets a vote, not a veto, in the determination of human behavior. We should indulge our fascination with nature–nurture while resisting the temptation to oversimplify it.

Outside Resources

Web: Institute for Behavioral Genetics
http://www.colorado.edu/ibg/

Discussion Questions

1. Is your personality more like one of your parents than the other? If you have a sibling, is his or her personality like yours? In your family, how did these similarities and differences develop? What do you think caused them?

2. Can you think of a human characteristic for which genetic differences would play almost no role? Defend your choice.

3. Do you think the time will come when we will be able to predict almost everything about someone by examining their DNA on the day they are born?

4. Identical twins are more similar than fraternal twins for the trait of aggressiveness, as well as for criminal behavior. Do these facts have implications for the courtroom? If it can be shown that a violent criminal had violent parents, should it make a difference in culpability or sentencing?

Vocabulary

Adoption study
A behavior genetic research method that involves comparison of adopted children to their adoptive and biological parents.

Behavioral genetics
The empirical science of how genes and environments combine to generate behavior.

Heritability coefficient
An easily misinterpreted statistical construct that purports to measure the role of genetics in the explanation of differences among individuals.

Quantitative genetics
Scientific and mathematical methods for inferring genetic and environmental processes based on the degree of genetic and environmental similarity among organisms.

Twin studies
A behavior genetic research method that involves comparison of the similarity of identical (monozygotic; MZ) and fraternal (dizygotic; DZ) twins.

References

Bouchard, T. J., Lykken, D. T., McGue, M., & Segal, N. L. (1990). Sources of human psychological differences: The Minnesota study of twins reared apart. Science, 250(4978), 223–228.

Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., Taylor, A. & Poulton, R. (2002). Role of genotype in the cycle of violence in maltreated children. Science, 297(5582), 851–854.

McGue, M., & Lykken, D. T. (1992). Genetic influence on risk of divorce. Psychological Science, 3(6), 368–373.

Plomin, R., Corley, R., DeFries, J. C., & Fulker, D. W. (1990). Individual differences in television viewing in early childhood: Nature as well as nurture. Psychological Science, 1(6), 371–377.

Plomin, R., DeFries, J. C., Knopik, V. S., & Neiderhiser, J. M. (2012). Behavioral genetics. New York, NY: Worth Publishers.

Scott, J. P., & Fuller, J. L. (1998). Genetics and the social behavior of the dog. Chicago, IL: University of Chicago Press.

Turkheimer, E. (2000). Three laws of behavior genetics and what they mean. Current Directions in Psychological Science, 9(5), 160–164.

Gender and Ageing

10
Aging

Tara Queen & Jacqui Smith

Traditionally, research on aging described only the lives of people over age 65 and the very old. Contemporary theories and research recognizes that biogenetic and psychological processes of aging are complex and lifelong. Functioning in each period of life is influenced by what happened earlier and, in turn, affects subsequent change. We all age in specific social and historical contexts. Together, these multiple influences on aging make it difficult to define when middle-age or old age begins. This module describes central concepts and research about adult development and aging. We consider contemporary questions about cognitive aging and changes in personality, self-related beliefs, social relationships, and subjective well-being. These four aspects of psychosocial aging are related to health and longevity

Learning Objectives

- Explain research approaches to studying aging.
- Describe cognitive, psychosocial, and physical changes that occur with age.
- Provide examples of how age-related changes in these domains are observed in the context of everyday life.

Introduction

We are currently living in an aging society (Rowe, 2009). Indeed, by 2030 when the last of the Baby Boomers reach age 65, the U.S. older population will be double that of 2010. Furthermore, because of increases in average life expectancy, each new generation can expect to live longer

Due to positive health trends the population of older adults is increasing steadily. Understanding the psychology of aging will be more important than ever to support this group and help them thrive. [Photo: Woody Hibbard, https://goo.gl/VP7pfz, CC BY 2.0, https://goo.gl/JD0cjj]

than their parents' generation and certainly longer than their grandparents' generation. As a consequence, it is time for individuals of all ages to rethink their personal life plans and consider prospects for a long life. When is the best time to start a family? Will the education gained up to age 20 be sufficient to cope with future technological advances and marketplace needs? What is the right balance between work, family, and leisure throughout life? What's the best age to retire? How can I age successfully and enjoy life to the fullest when I'm 80 or 90? In this module we will discuss several different domains of psychological research on aging that will help answer these important questions.

Overview: Life Span and Life Course Perspectives on Aging

Just as young adults differ from one another, older adults are also not all the same. In each decade of adulthood, we observe substantial **heterogeneity** in cognitive functioning, personality, social relationships, lifestyle, beliefs, and satisfaction with life. This heterogeneity reflects differences in rates of biogenetic and psychological aging and the sociocultural contexts and history of people's lives (Bronfenbrenner, 1979; Fingerman, Berg, Smith, & Antonucci, 2011). Theories of aging describe how these multiple factors interact and change over time. They describe why functioning differs on average between young, middle-aged, young-old, and very old adults and why there is heterogeneity within these age groups. **Life course theories**, for example, highlight the effects of social expectations and the normative timing of life events and social roles (e.g., becoming a parent, retirement). They also consider the lifelong cumulative effects of membership in specific **cohorts** (generations) and sociocultural subgroups (e.g., race, gender, socioeconomic status) and exposure to historical events (e.g., war, revolution, natural disasters; Elder, Johnson, & Crosnoe, 2003; Settersten, 2005). **Life span theories** complement the life-course perspective with a greater focus on processes within the individual (e.g., the aging brain). This approach emphasizes the patterning of lifelong **intra- and inter-individual differences** in the shape (gain, maintenance,

loss), level, and rate of change (Baltes, 1987, 1997). Both life course and life span researchers generally rely on longitudinal studies to examine hypotheses about different patterns of aging associated with the effects of biogenetic, life history, social, and personal factors. Cross-sectional studies provide information about age-group differences, but these are confounded with cohort, time of study, and historical effects.

Cognitive Aging

Researchers have identified areas of both losses and gains in cognition in older age. Cognitive ability and intelligence are often measured using standardized tests and validated measures. The psychometric approach has identified two categories of intelligence that show different rates of change across the life span (Schaie & Willis, 1996). Fluid intelligence refers to information processing abilities, such as logical reasoning, remembering lists, spatial ability, and reaction time. Crystallized intelligence encompasses abilities that draw upon experience and knowledge. Measures of crystallized intelligence include vocabulary tests, solving number problems, and understanding texts.

With age, systematic declines are observed on cognitive tasks requiring self-initiated, effortful processing, without the aid of supportive memory cues (Park, 2000). Older adults tend to perform poorer than young adults on memory tasks that involve recall of information, where individuals must retrieve information they learned previously without the help of a list of possible choices. For example, older adults may have more difficulty recalling facts such as names or contextual details about where or when something happened (Craik, 2000). What might explain these deficits as we age? As we age, working memory, or our ability to simultaneously store and use information, becomes less efficient (Craik & Bialystok, 2006). The ability to process information quickly also decreases with age. This slowing of processing speed may explain age differences on many different cognitive

There are many stereotypes of older adults. They are sometimes seen as slow because of changes in cognitive processing speed. They are though, on average, excellent at drawing on personal experience and knowledge. And they tend to outperform young adults when it comes to social and emotional challenges. [Image: Alex E. Proimos, https://goo.gl/20SbW8, CC BY-NC 2.0, https://goo.gl/FIlc2e]

tasks (Salthouse, 2004). Some researchers have argued that **inhibitory functioning**, or the ability to focus on certain information while suppressing attention to less pertinent information, declines with age and may explain age differences in performance on cognitive tasks (Hasher & Zacks, 1988). Finally, it is well established that our hearing and vision decline as we age. Longitudinal research has proposed that deficits in sensory functioning explain age differences in a variety of cognitive abilities (Baltes & Lindenberger, 1997).

Fewer age differences are observed when memory cues are available, such as for **recognition** memory tasks, or when individuals can draw upon acquired knowledge or experience. For example, older adults often perform as well if not better than young adults on tests of word knowledge or vocabulary. With age often comes expertise, and research has pointed to areas where aging experts perform as well or better than younger individuals. For example, older typists were found to compensate for age-related declines in speed by looking farther ahead at printed text (Salthouse, 1984). Compared to younger players, older chess experts are able to focus on a smaller set of possible moves, leading to greater cognitive efficiency (Charness, 1981). Accrued knowledge of everyday tasks, such as grocery prices, can help older adults to make better decisions than young adults (Tentori, Osheron, Hasher, & May, 2001).

How do changes or maintenance of cognitive ability affect older adults' everyday lives? Researchers have studied cognition in the context of several different everyday activities. One example is driving. Although older adults often have more years of driving experience, cognitive declines related to reaction time or attentional processes may pose limitations under certain circumstances (Park & Gutchess, 2000). Research on interpersonal problem solving suggested that older adults use more effective strategies than younger adults to navigate through social and emotional problems (Blanchard-Fields, 2007). In the context of work, researchers rarely find that older individuals perform poorer on the job (Park & Gutchess, 2000). Similar to everyday problem solving, older workers may develop more efficient strategies and rely on expertise to compensate for cognitive decline.

Personality and Self-Related Processes

Research on adult personality examines normative age-related increases and decreases in the expression of the so-called "Big Five" traits—extraversion, neuroticism, conscientiousness, agreeableness, and openness to new experience. Does personality change throughout adulthood? Previously the answer was no, but contemporary research shows that although some people's personalities are relatively stable over time, others' are not (Lucas & Donnellan, 2011; Roberts & Mroczek, 2008). Longitudinal studies reveal average changes during adulthood in the expression of some traits (e.g., neuroticism and openness decrease with age

and conscientiousness increases) and individual differences in these patterns due to idiosyncratic life events (e.g., divorce, illness). Longitudinal research also suggests that adult personality traits, such as conscientiousness, predict important life outcomes including job success, health, and longevity (Friedman, Tucker, Tomlinson-Keasey, Schwartz, Wingard, & Criqui, 1993; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007).

In contrast to the relative stability of personality traits, theories about the aging self-propose changes in self-related knowledge, beliefs, and **autobiographical narratives**. Responses to questions such as "Tell me something about yourself. Who are you?" "What are your hopes for the future?" provide insight into the characteristics and life themes that an individual considers uniquely distinguish him or herself from others. These self-descriptions enhance self-esteem and guide behavior (Markus & Nurius, 1986; McAdams, 2006). Theory suggests that as we age, themes that were relatively unimportant in young and middle adulthood gain in salience (e.g., generativity, health) and that people view themselves as improving over time (Ross & Wilson, 2003). Reorganizing personal life narratives and self-descriptions are the major tasks of midlife and young-old age due to transformations in professional and family roles and obligations. In advanced old age, self-descriptions are often characterized by a life review and reflections about having lived a long life. Birren and Schroots (2006), for example, found the process of life review in late life helped individuals confront and cope with the challenges of old age.

There is a difference between physical age and subjective age as summarized in the saying "You are only as old as you feel." [Image: Emar, CC BY-NC-SA 2.0, https://goo.gl/HEXbAA]

One aspect of the self that particularly interests life span and life course psychologists is the individual's perception and evaluation of their own aging and identification with an age group. **Subjective age** is a multidimensional construct that indicates how old (or young) a person feels and into which age group a person categorizes him- or herself. After early adulthood, most people say that they feel younger than their chronological age and the gap between subjective age and actual age generally increases. On average, after age 40 people report feeling 20% younger than their actual age (e.g., Rubin & Berntsen, 2006). Asking people how satisfied they are with their own aging

assesses an evaluative component of <u>age identity</u>. Whereas some aspects of age identity are positively valued (e.g., acquiring seniority in a profession or becoming a grandparent), others may be less valued, depending on societal context. Perceived physical age (i.e., the age one looks in a mirror) is one aspect that requires considerable self-related adaptation in social and cultural contexts that value young bodies. Feeling younger and being satisfied with one's own aging are expressions of positive <u>self-perceptions of aging</u>. They reflect the operation of self-related processes that enhance well-being. Levy (2009) found that older individuals who are able to adapt to and accept changes in their appearance and physical capacity in a positive way report higher well-being, have better health, and live longer.

Social Relationships

Social ties to family, friends, mentors, and peers are primary resources of information, support, and comfort. Individuals develop and age together with family and friends and interact with others in the community. Across the life course, social ties are accumulated, lost, and transformed. Already in early life, there are multiple sources of heterogeneity in the characteristics of each person's <u>social network</u> of relationships (e.g., size, composition, and quality). Life course and life span theories and research about age-related patterns in social relationships focus on understanding changes in the processes underlying social connections. Antonucci's <u>Convoy Model of Social Relations</u> (2001; Kahn & Antonucci, 1980), for example, suggests that the social connections that people accumulate are held together by exchanges in social support (e.g., tangible and emotional). The frequency, types, and reciprocity of the exchanges change with age and in response to need, and in turn, these exchanges impact the health and well-being of the givers and receivers in the convoy. In many relationships, it is not the actual objective exchange of support that is critical but instead the perception that support is available if needed (Uchino, 2009). Carstensen's <u>Socioemotional Selectivity Theory</u> (1993; Carstensen, Isaacowitz, & Charles, 1999) focuses on changes in motivation for actively seeking social contact with others. She proposes that with increasing age our motivational goals change from information gathering to emotion regulation. To optimize the experience of positive affect, older adults actively restrict their social life to prioritize time spent with emotionally close significant others. In line with this, older marriages are found to be characterized by enhanced positive and reduced negative interactions and older partners show more affectionate behavior during conflict discussions than do middle-aged partners (Carstensen, Gottman, & Levenson, 1995). Research showing that older adults have smaller networks compared to young adults and tend to avoid negative interactions also supports this theory. Similar selective processes are also observed when time horizons for interactions with close partners shrink temporarily for young adults (e.g., impending geographical

separations).

Much research focuses on the associations between specific effects of long-term social relationships and health in later life. Older married individuals who receive positive social and emotional support from their partner generally report better health than their unmarried peers (Antonucci, 2001; Umberson, Williams, Powers, Liu, & Needham, 2006; Waite & Gallagher, 2000). Despite the overall positive health effects of being married in old age (compared with being widowed, divorced, or single), living as a couple can have a "dark side" if the relationship is strained or if one partner is the primary caregiver. The consequences of positive and negative aspects of relationships are complex (Birditt & Antonucci, 2008; Rook, 1998; Uchino, 2009). For example, in some circumstances, criticism from a partner may be perceived as valid and useful feedback whereas in others it is considered unwarranted and hurtful. In long-term relationships, habitual negative exchanges might have diminished effects. Parent-child and sibling relationships are often the most long-term and emotion-laden social ties. Across the life span, the parent-child tie, for example, is characterized by a paradox of solidarity, conflict, and ambivalence (Fingerman, Chen, Hay, Cichy, & Lefkowitz, 2006).

Emotion and Well-being

As we get older, the likelihood of losing loved ones or experiencing declines in health increases. Does the experience of such losses result in decreases in well-being in older adulthood? Researchers have found that well-being differs across the life span and that the patterns of these differences depend on how well-being is measured.

Measures of **global subjective well-being** assess individuals' overall perceptions of their lives. This can include questions about life satisfaction or judgments of whether individuals are currently living the best life possible. What factors may contribute to how people respond to these questions? Age, health, personality, social support, and life experiences have been shown to influence judgments of global well-being. It is important to note that predictors of well-being may change as we age. What is important to life satisfaction in young adulthood can be different in later adulthood (George, 2010). Early research on well-being argued that life events such as marriage or divorce can temporarily influence well-being, but people quickly adapt and return to a neutral baseline (called the hedonic treadmill; Diener, Lucas, & Scollon, 2006). More recent research suggests otherwise. Using longitudinal data, researchers have examined well-being prior to, during, and after major life events such as widowhood, marriage, and unemployment (Lucas, 2007). Different life events influence well-being in different ways, and individuals do not often adapt back to baseline levels of well-being. The influence of events, such as unemployment, may have a lasting negative influence on well-being as people

age. Research suggests that global well-being is highest in early and later adulthood and lowest in midlife (Stone, Schwartz, Broderick, & Deaton, 2010).

Hedonic well-being refers to the emotional component of well-being and includes measures of positive (e.g., happiness, contentment) and negative affect (e.g., stress, sadness). The pattern of positive affect across the adult life span is similar to that of global well-being, with experiences of positive emotions such as happiness and enjoyment being highest in young and older adulthood. Experiences of negative affect, particularly stress and anger, tend to decrease with age. Experiences of sadness are lowest in early and later adulthood compared to midlife (Stone et al., 2010). Other research finds that older adults report more positive and less negative affect than middle age and younger adults (Magai, 2008; Mroczek, 2001). It should be noted that both global well-being and positive affect tend to taper off during late older adulthood and these declines may be accounted for by increases in health-related losses during these years (Charles & Carstensen, 2010).

Psychological well-being aims to evaluate the positive aspects of psychosocial development, as opposed to factors of ill-being, such as depression or anxiety. Ryff's model of psychological well-being proposes six core dimensions of positive well-being. Older adults tend to report higher environmental mastery (feelings of competence and control in managing everyday life) and autonomy (independence), lower personal growth and purpose in life, and similar levels of positive relations with others as younger individuals (Ryff, 1995). Links between health and interpersonal flourishing, or having high-quality connections with others, may be important in understanding how to optimize quality of life in old age (Ryff & Singer, 2000).

Physical activity is one of the pillars of successful aging. [Image: William Murphy, https://goo.gl/Khsbsb, CC BY-SA 2.0, https://goo.gl/jSSrcO]

Successful Aging and Longevity

Increases in average life expectancy in the 20th century and evidence from twin studies that suggests that genes account for only 25% of the variance in human life spans have opened new questions about implications for individuals and society (Christensen, Doblhammer, Rau, &

Vaupel, 2009). What environmental and behavioral factors contribute to a healthy long life? Is it possible to intervene to slow processes of aging or to minimize cognitive decline, prevent dementia, and ensure life quality at the end of life (Fratiglioni, Paillard-Borg, & Winblad, 2004; Hertzog, Kramer, Wilson, & Lindenberger, 2009; Lang, Baltes, & Wagner, 2007)? Should interventions focus on late life, midlife, or indeed begin in early life? Suggestions that pathological change (e.g., dementia) is not an inevitable component of aging and that pathology could at least be delayed until the very end of life led to theories about **successful aging** and proposals about targets for intervention. Rowe and Kahn (1997) defined three criteria of successful aging: (a) the relative avoidance of disease, disability, and risk factors like high blood pressure, smoking, or obesity; (b) the maintenance of high physical and cognitive functioning; and (c) active engagement in social and productive activities. Although such definitions of successful aging are value-laden, research and behavioral interventions have subsequently been guided by this model. For example, research has suggested that age-related declines in cognitive functioning across the adult life span may be slowed through physical exercise and lifestyle interventions (Kramer & Erickson, 2007). It is recognized, however, that societal and environmental factors also play a role and that there is much room for social change and technical innovation to accommodate the needs of the Baby Boomers and later generations as they age in the next decades.

Outside Resources

Web: Columbia Aging Society
http://www.agingsocietynetwork.org/

Web: Columbia International Longevity Center
http://www.mailman.columbia.edu/academic-departments/centers/columbia-aging/international-longevity-center-knowledge-transfer

Web: National Institute on Aging
http://www.nia.nih.gov/

Web: Stanford Center Longevity
http://longevity3.stanford.edu/

Discussion Questions

1. How do age stereotypes and intergenerational social interactions shape quality of life in older adults? What are the implications of the research of Levy and others?

2. Researchers suggest that there is both stability and change in Big Five personality traits after age 30. What is stable? What changes?

3. Describe the Social Convoy Model of Antonucci. What are the implications of this model for older adults?

4. Memory declines during adulthood. Is this statement correct? What does research show?

5. Is dementia inevitable in old age? What factors are currently thought to be protective?

6. What are the components of successful aging described by Rowe and Kahn (1998) and others? What outcomes are used to evaluate successful aging?

Vocabulary

Age identity
How old or young people feel compared to their chronological age; after early adulthood, most people feel younger than their chronological age.

Autobiographical narratives
A qualitative research method used to understand characteristics and life themes that an individual considers to uniquely distinguish him- or herself from others.

Average life expectancy
Mean number of years that 50% of people in a specific birth cohort are expected to survive. This is typically calculated from birth but is also sometimes re-calculated for people who have already reached a particular age (e.g., 65).

Cohort
Group of people typically born in the same year or historical period, who share common experiences over time; sometimes called a generation (e.g., Baby Boom Generation).

Convoy Model of Social Relations
Theory that proposes that the frequency, types, and reciprocity of social exchanges change with age. These social exchanges impact the health and well-being of the givers and receivers in the convoy.

Cross-sectional studies
Research method that provides information about age group differences; age differences are confounded with cohort differences and effects related to history and time of study.

Crystallized intelligence
Type of intellectual ability that relies on the application of knowledge, experience, and learned information.

Fluid intelligence
Type of intelligence that relies on the ability to use information processing resources to reason logically and solve novel problems.

Global subjective well-being
Individuals' perceptions of and satisfaction with their lives as a whole.

Hedonic well-being
Component of well-being that refers to emotional experiences, often including measures of positive (e.g., happiness, contentment) and negative affect (e.g., stress, sadness).

Heterogeneity
Inter-individual and subgroup differences in level and rate of change over time.

Inhibitory functioning
Ability to focus on a subset of information while suppressing attention to less relevant information.

Intra- and inter-individual differences
Different patterns of development observed within an individual (intra-) or between individuals (inter-).

Life course theories
Theory of development that highlights the effects of social expectations of age-related life events and social roles; additionally considers the lifelong cumulative effects of membership in specific cohorts and sociocultural subgroups and exposure to historical events.

Life span theories
Theory of development that emphasizes the patterning of lifelong within- and between-person differences in the shape, level, and rate of change trajectories.

Longitudinal studies
Research method that collects information from individuals at multiple time points over time, allowing researchers to track cohort differences in age-related change to determine cumulative effects of different life experiences.

Processing speed
The time it takes individuals to perform cognitive operations (e.g., process information, react to a signal, switch attention from one task to another, find a specific target object in a complex picture).

Psychometric approach
Approach to studying intelligence that examines performance on tests of intellectual functioning.

Recall

Type of memory task where individuals are asked to remember previously learned information without the help of external cues.

Recognition
Type of memory task where individuals are asked to remember previously learned information with the assistance of cues.

Self-perceptions of aging
An individual's perceptions of their own aging process; positive perceptions of aging have been shown to be associated with greater longevity and health.

Social network
Network of people with whom an individual is closely connected; social networks provide emotional, informational, and material support and offer opportunities for social engagement.

Socioemotional Selectivity Theory
Theory proposed to explain the reduction of social partners in older adulthood; posits that older adults focus on meeting emotional over information-gathering goals, and adaptively select social partners who meet this need.

Subjective age
A multidimensional construct that indicates how old (or young) a person feels and into which age group a person categorizes him- or herself

Successful aging
Includes three components: avoiding disease, maintaining high levels of cognitive and physical functioning, and having an actively engaged lifestyle.

Working memory
Memory system that allows for information to be simultaneously stored and utilized or manipulated.

References

Antonucci, T. C. (2001). Social relations: An examination of social networks, social support and sense of control. In J.E. Birren & K. W. Schaie (Eds.), *Handbook of the psychology of aging* (5th ed., pp. 427–453). New York: Academic Press.

Baltes, P. B . (1987). Theoretical propositions of lifespan developmental psychology: On the dynamics between growth and decline. Developmental Psychology, 23, 611–626.

Baltes, P. B. & Lindenberger, U. (1997). Emergence of powerful connection between sensory and cognitive functions across the adult life span: A new window to the study of cognitive aging? *Psychology and Aging, 12*, 12–21.

Birditt, K., & Antonucci, T. C. (2008). Life sustaining irritations? Relationship quality and mortality in the context of chronic illness. *Social Science & Medicine, 67*, 1291.

Birren, J. E. & Schroots, J. J. F. (2006). Autobiographical memory and the narrative self over the life span. In J. E. Birren and K. Warner Schaie (Eds.) *Handbook of the psychology of aging* (6th ed. pp. 477–499). Burlingham, MA: Elsevier Academic Press.

Blanchard-Fields, F. (2007). Everyday problem solving and emotion: An adult development perspective. Current Directions in Psychological Science, 16, 26–31.

Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.

Carstensen, L. L. (1993). Motivation for social contact across the life span: A theory of socioemotional selectivity. In J. E. Jacobs (Ed.), Nebraska Symposium on Motivation, 1992: *Developmental perspectives on motivation* (pp. 209–254). Lincoln, NE: University of Nebraska Press.

Carstensen, L. L., Gottman, J. M., & Levensen, R. W. (1995). Emotional behavior in long-term marriage. *Psychology and Aging, 10*, 140–149.

Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist, 54*, 165–181.

Charles, S. T., & Carstensen, L. L. (2010). Social and emotional aging. *Annual review of psychology, 61*, 383–409.

Charness, N. (1981). Search in chess: Age and skill differences. *Journal of Experimental Psychology: Human Perception and Performance, 7*, 467.

Christensen, K., Doblhammer, G., Rau, R., Vaupel, J. W. (2009). Ageing populations: the challenges ahead. *Lancet, 374*, 1196–208.

Craik, F. I., & Bialystok, E. (2006). Cognition through the lifespan: mechanisms of change. *Trends*

in Cognitive Sciences, 10, 131–138.

Craik, F. I. M. (2000). Age-related changes in human memory. In D. C. Park & N. Schwarz (Eds.), *Cognitive Aging: A Primer* (pp. 75–92). New York: Psychology Press.

Diener, E., Lucas, R. E., & Scollon, C. N. (2006). Beyond the hedonic treadmill: revising the adaptation theory of well-being. *American Psychologist, 61*, 305.

Elder, G. H., Johnson, M. K., & Crosnoe, R. (2003). The emergence and development of life course theory. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the Life Course*, 3-19. New York: Kluwer Academic/Plenum Publishers.

Fingerman, K. L., Berg, C. A., Smith, J., & Antonucci, T.C. (Eds.) (2011). *Handbook of Life-Span Development*. New York: Springer

Fingerman, K. L., Chen, P. C., Hay, E., Cichy, K. E., & Lefkowitz, E. S. (2006). Ambivalent reactions in the parent and offspring relationship. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 61*, 152-160.

Fratiglioni, L., Paillard-Borg, S., & Winblad, B. (2004). An active and socially integrated lifestyle in late life might protect against dementia. Lancet Neurology, 3, 343–353

Friedman, H. S., Tucker, J. S., Tomlinson-Keasey, C., Schwartz, J. E., Wingard, D. L., & Criqui, M. H. (1993). Does childhood personality predict longevity? *Journal of Personality and Social Psychology, 65*, 176–185. doi:10.1037/0022-3514.65.1.176

George, L. K. (2010). Still happy after all these years: Research frontiers on subjective well-being in later life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 65*, 331.

Hasher, L. & Zacks, R. T. (1988). Working memory, comprehension, and aging: A review and a new view. In G.H. Bower (Ed.), *The Psychology of Learning and Motivation*, (Vol. 22, pp. 193–225). San Diego, CA: Academic Press.

Hertzog, C., Kramer, A. F., Wilson, R. S., & Lindenberger, U. (2009). Enrichment effects on adult cognitive development: Can the functional capacity of older adults be preserved and enhanced? *Psychological Science in the Public Interest, 9*, 1–65

Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. B. Baltes & O. G. Brim (Eds.), *Life-span development and behavior* (pp. 253–286). New York: Academic Press.

Kramer, A. F. & Erickson, K. I. (2007). Capitalizing on cortical plasticity: The influence of physical activity on cognition and brain function. *Trends in Cognitive Sciences, 11*, 342–348.

Lang, F. R., Baltes, P. B., & Wagner, G. G. (2007). Desired lifetime and end-of-life desires across ddulthood From 20 to 90: A dual-source information model. *Journal of Gerontology:*

Psychological Sciences, 62B, 268–276.

Levy, B. (2009). Stereotype Embodiment: A Psychosocial Approach to Aging. *Current Directions in Psychological Science, 18(6)*, 332–336

Lucas, R. E. (2007). Adaptation and the Set-Point Model of Subjective Well-Being Does Happiness Change After Major Life Events?. *Current Directions in Psychological Science, 16*, 75–79.

Lucas, R. E. & Donnellan, A. B. (2011). Personality development across the life span: Longitudinal analyses with a national sample from Germany. *Journal of Personality and Social Psychology, 101*, 847–861

Magai, C. (2008). Long-lived emotions. In M. Lewis, J. M. Haviland-Jones, & L. Feldman Barrett (Eds.), *Handbook of Emotions*, 376–392. New York: Guilford.

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*, 954–969.

McAdams, D. P.(2006). The redemptive self: Generativity and the stories Americans live by. *Research in Human Development, 3(2-3)*, 81–100.

Mroczek, D. K. (2001). Age and emotion in adulthood. *Current Directions in Psychological Science, 10(3)*, 87–90.

Park, D. C. (2000). The basic mechanisms accounting for age-related decline in cognitive function. In D.C. Park & N. Schwarz (Eds.), *Cognitive Aging: A Primer* (pp. 3–21). New York: Psychology Press.

Park, D. C. & Gutchess, A. H. (2000). Cognitive aging and everyday life. In D.C. Park & N. Schwarz (Eds.), *Cognitive Aging: A Primer* (pp. 217–232). New York: Psychology Press.

Roberts, B. W., & Mroczek, D. K. (2008). Personality trait change in adulthood. *Current Directions in Psychological Science, 17*, 31–35.

Roberts, B. W., Kuncel, N., Shiner, R., N., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science, 2(4)*, 313–345. doi:10.1111/j.1745-6916.2007.00047.

Rook, K. S. (1998). Investigating the positive and negative sides of personal relationships: Through a lens darkly? In W. R. Cupach & B. H. Spitzberg (Eds.), *The dark side of close relationships* (pp. 369–393). Mahwah, NJ: Lawrence Erlbaum.

Ross, M., & Wilson, A. E. (2003). Autobiographical memory and conceptions of self: Getting better all the time. *Current Directions in Psychological Science, 12*, 66–69.

Rowe, J. W. (2009). Facts and fictions about an aging America. *Contexts, 8*, 16–21.

Rowe, J. W. & Kahn, R. L. (1997). Successful aging. *The Gerontologist, 37(4)*, 433–440.

Rubin, D., & Berntsen, D. (2006). People over 40 feel 20% younger than their age: Subjective age across the lifespan. *Psychonomic Bulletin & Review. 13*, 776–780

Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science, 4(4)*, 99–104

Ryff, C. D., & Singer, B. (2000). Interpersonal flourishing: A positive health agenda for the new millennium. *Personality and Social Psychology Review, 4*, 30–44.

Salthouse, T. A. (2004). What and when of cognitive aging. *Current Directions in Psychological Science, 13*, 140–144.

Salthouse, T. A. (1984). Effects of age and skill in typing. *Journal of Experimental Psychology: General, 113*, 345.

Schaie, K. W. & Willis, S. L. (1996). Psychometric intelligence and aging. In F. Blanchard-Fields & T.M. Hess (Eds.), *Perspectives on Cognitive Change in Adulthood and Aging* (pp. 293–322). New York: McGraw Hill.

Settersten, R. A., Jr. (2005). Toward a stronger partnership between lifecourse sociology and life-span psychology. *Research in Human Development, 2(1–2)*, 25–41.

Stone, A. A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. *Proceedings of the National Academy of Sciences, 107*, 9985–9990.

Tentori, K., Osherson, D., Hasher, L., & May, C. (2001). Wisdom and aging: Irrational preferences in college students but not older adults. *Cognition, 81*, B87–B96.

Uchino, B. N. (2009). What a lifespan approach might tell us about why distinct measures of social support have differential links to physical health. *Journal of Social and Personal Relationships, 26(1)*, 53–62. DOI: 10.1177/0265407509105521

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You make me sick: Marital quality and health over the life course. *Journal of Health and Social Behavior, 47*, 1–16.

Waite, L. J. & Gallagher, M. (2000). *The case for marriage: Why married people are happier, healthier, and better off financially*. New York: Doubleday.

11
Gender

Christia Spears Brown, Jennifer A. Jewell & Michelle J. Tam

This module discusses gender and its related concepts, including sex, gender roles, gender identity, sexual orientation, and sexism. In addition, this module includes a discussion of differences that exist between males and females and how these real gender differences compare to the stereotypes society holds about gender differences. In fact, there are significantly fewer real gender differences than one would expect relative to the large number of stereotypes about gender differences. This module then discusses theories of how gender roles develop and how they contribute to strong expectations for gender differences. Finally, the module concludes with a discussion of some of the consequences of relying on and expecting gender differences, such as gender discrimination, sexual harassment, and ambivalent sexism.

Learning Objectives

- Distinguish gender and sex, as well as gender identity and sexual orientation.
- Discuss gender differences that exist, as well as those that do not actually exist.
- Understand and explain different theories of how gender roles are formed.
- Discuss sexism and its impact on gender.

Introduction

Before we discuss gender in detail, it is important to understand what gender actually is. The terms sex and gender are frequently used interchangeably, though they have different

meanings. In this context, <u>sex</u> refers to the biological category of male or female, as defined by physical differences in genetic composition and in reproductive anatomy and function. On the other hand, <u>gender</u> refers to the cultural, social, and psychological meanings that are associated with masculinity and femininity (Wood & Eagly, 2002). You can think of "male" and "female" as distinct categories of sex (a person is typically born a male or a female), but "masculine" and "feminine" as continuums associated with gender (everyone has a certain degree of masculine and feminine traits and qualities).
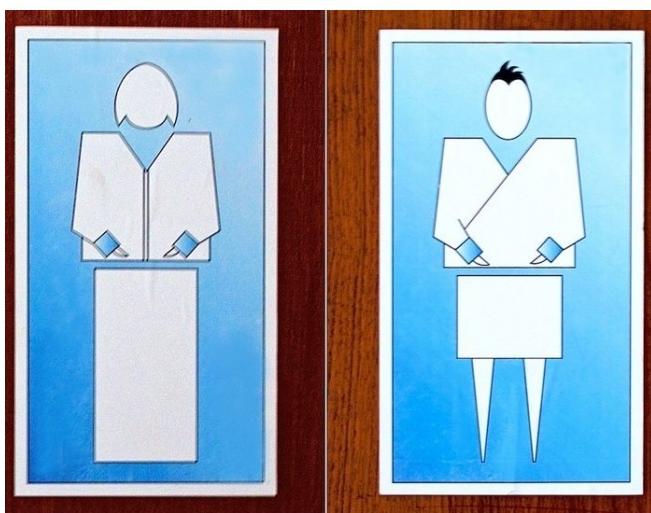
Gender refers to the cultural, social, and psychological meanings that are associated with masculinity and femininity. [Photo: Michael Foley Photography, https://goo.gl/B46jym, CC BY-NC-ND 2.0, https://goo.gl/aAX82f]

Beyond sex and gender, there are a number of related terms that are also often misunderstood. <u>Gender roles</u> are the behaviors, attitudes, and personality traits that are designated as either masculine or feminine in a given culture. It is common to think of gender roles in terms of <u>gender stereotypes</u>, or the beliefs and expectations people hold about the typical characteristics, preferences, and behaviors of men and women. A person's <u>gender identity</u> refers to their psychological sense of being male or female. In contrast, a person's <u>sexual orientation</u> is the direction of their emotional and erotic attraction toward members of the opposite sex, the same sex, or both sexes. These are important distinctions, and though we will not discuss each of these terms in detail, it is important to recognize that sex, gender, gender identity, and sexual orientation do not always correspond with one another. A person can be biologically male but have a female gender identity while being attracted to women, or any other combination of identities and orientations.

Defining Gender

Historically, the terms gender and sex have been used interchangeably. Because of this, gender is often viewed as a <u>binary</u> – a person is either male *or* female – and it is assumed that a person's gender matches their biological sex. This is not always the case, however, and more recent research has separated these two terms. While the majority of people do identify with the gender that matches their biological sex (<u>cisgender</u>), an estimated 0.6% of the population

identify with a gender that does not match their biological sex (**transgender**; Flores, Herman, Gates, & Brown, 2016). For example, an individual who is biologically male may identify as female, or vice versa.

In addition to separating gender and sex, recent research has also begun to conceptualize gender in ways beyond the gender binary. **Genderqueer or gender nonbinary** are umbrella terms used to describe a wide range of individuals who do not identify with and/or conform to the gender binary. These terms encompass a variety of more specific labels individuals may use to describe themselves. Some common labels are **genderfluid**, **agender**, and **bigender**. An individual who is genderfluid may identify as male, female, both, or neither at different times and in different circumstances. An individual who is agender may have no gender or describe themselves as having a neutral gender, while bigender individuals identify as two genders.

It is important to remember that sex and gender do not always match and that gender is not always binary; however, a large majority of prior research examining gender has not made these distinctions. As such, the following sections will discuss gender as a binary.

The (Trans)Gender-Bathroom Debate

In recent years, there has been much cultural and political debate over the right of transgender individuals to use the public bathroom of their choosing. This debate made major headlines in 2016 when North Carolina passed the Public Facilities Privacy & Security Act (commonly called House Bill 2 or HB2). This law required individuals to use the restroom that corresponded with their birth sex, meaning that transgender individuals could not use the bathroom that matched their gender identity. This law and the similar "bathroom bills" proposed by other states were met with widespread controversy, with opponents arguing that they were discriminatory and perpetuated inequality (Barnett, Nesbit, & Sorrentino, 2018). HB2 has since been repealed, but many states still do not protect the rights of transgender individuals to use their restrooms of choice.

Text Box 1

Gender Differences

Differences between males and females can be based on (a) actual gender differences (i.e., men and women are actually different in some abilities), (b) gender roles (i.e., differences in how men and women are supposed to act), or (c) gender stereotypes (i.e., differences in how we *think* men and women are). Sometimes gender stereotypes and gender roles reflect actual

gender differences, but sometimes they do not.

What are actual gender differences? In terms of language and language skills, girls develop language skills earlier and know more words than boys; this does not, however, translate into long-term differences. Girls are also more likely than boys to offer praise, to agree with the person they're talking to, and to elaborate on the other person's comments; boys, in contrast, are more likely than girls to assert their opinion and offer criticisms (Leaper & Smith, 2004). In terms of temperament, boys are slightly less able to suppress inappropriate responses and slightly more likely to blurt things out than girls (Else-Quest, Hyde, Goldsmith, & Van Hulle, 2006).

With respect to aggression, boys exhibit higher rates of unprovoked physical aggression than girls, but no difference in provoked aggression (Hyde, 2005). Some of the biggest differences involve the play styles of children. Boys frequently play organized rough-and-tumble games in large groups, while girls often play less physical activities in much smaller groups (Maccoby, 1998). There are also differences in the rates of depression, with girls much more likely than boys to be depressed after puberty. After puberty, girls are also more likely to be unhappy with their bodies than boys.

Boys exhibit higher rates of unprovoked physical aggression than girls and are more likely to play organized rough-and-tumble games. [Image: Aislinn Ritchie, https://goo.gl/cVQ0Ab, CC BY-SA 2.0, https://goo.gl/jSSrcO]

However, there is considerable variability between individual males and individual females. Also, even when there are mean level differences, the actual size of most of these differences is quite small. This means, knowing someone's gender does not help much in predicting his or her actual traits. For example, in terms of activity level, boys are considered more active than girls. However, 42% of girls are more active than the average boy (but so are 50% of boys; see Figure 1 for a depiction of this phenomenon in a comparison of male and female self-esteem). Furthermore, many gender differences do not reflect innate differences, but instead reflect differences in specific experiences and socialization. For example, one presumed gender difference is that boys show better spatial abilities than girls. However, Tzuriel and Egozi (2010) gave girls the chance to practice their spatial skills (by imagining a line drawing was different shapes) and discovered that, with practice, this gender difference

completely disappeared.
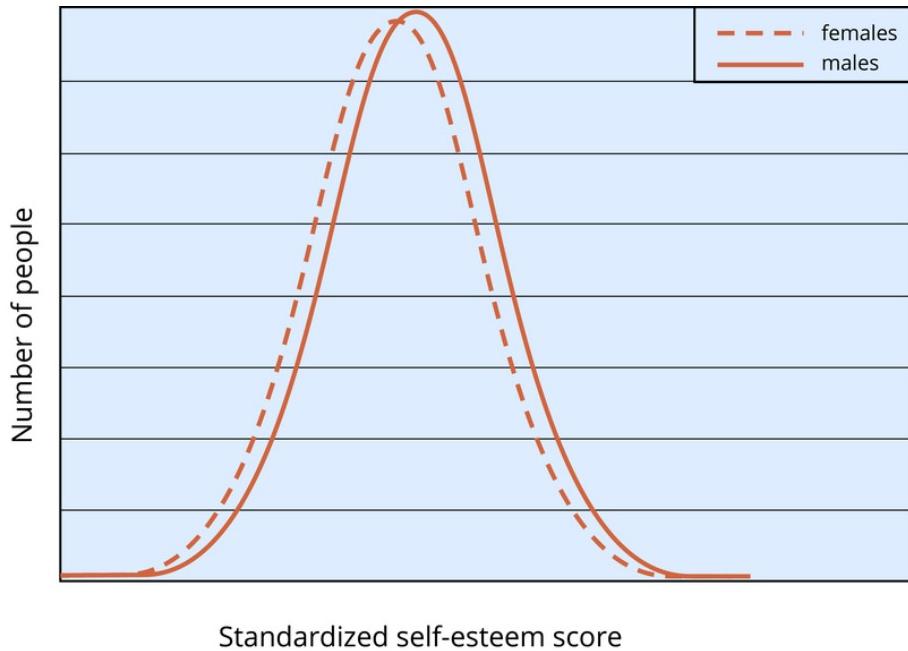
Figure 1. While our gender stereotypes paint males and females as drastically different from each other, even when a difference exists, there is considerable overlap in the presence of that trait between genders. This graph shows the average difference in self-esteem between boys and girls. Boys have a higher average self-esteem than girls, but the average scores are much more similar than different. Taken from Hyde (2005).

Many domains we assume differ across genders are really based on gender stereotypes and not actual differences. Based on large meta-analyses, the analyses of thousands of studies across more than one million people, research has shown: Girls are not more fearful, shy, or scared of new things than boys; boys are not more angry than girls and girls are not more emotional than boys; boys do not perform better at math than girls; and girls are not more talkative than boys (Hyde, 2005).

In the following sections, we'll investigate gender roles, the part they play in creating these stereotypes, and how they can affect the development of real gender differences.

Gender Roles

As mentioned earlier, gender roles are well-established social constructions that may change from culture to culture and over time. In American culture, we commonly think of gender roles in terms of **gender stereotypes**, or the beliefs and expectations people hold about the typical

characteristics, preferences, and behaviors of men and women.

By the time we are adults, our gender roles are a stable part of our personalities, and we usually hold many gender stereotypes. When do children start to learn about gender? Very early. By their first birthday, children can distinguish faces by gender. By their second birthday, they can label others' gender and even sort objects into gender-typed categories. By the third birthday, children can consistently identify their own gender (see Martin, Ruble, & Szkrybalo, 2002, for a review). At this age, children believe sex is determined by external attributes, not biological attributes. Between 3 and 6 years of age, children learn that gender is constant and can't change simply by changing external attributes, having developed **gender constancy**. During this period, children also develop strong and rigid gender stereotypes. Stereotypes can refer to play (e.g., boys play with trucks, and girls play with dolls), traits (e.g., boys are strong, and girls like to cry), and occupations (e.g., men are doctors and women are nurses). These stereotypes stay rigid until children reach about age 8 or 9. Then they develop cognitive abilities that allow them to be more flexible in their thinking about others.
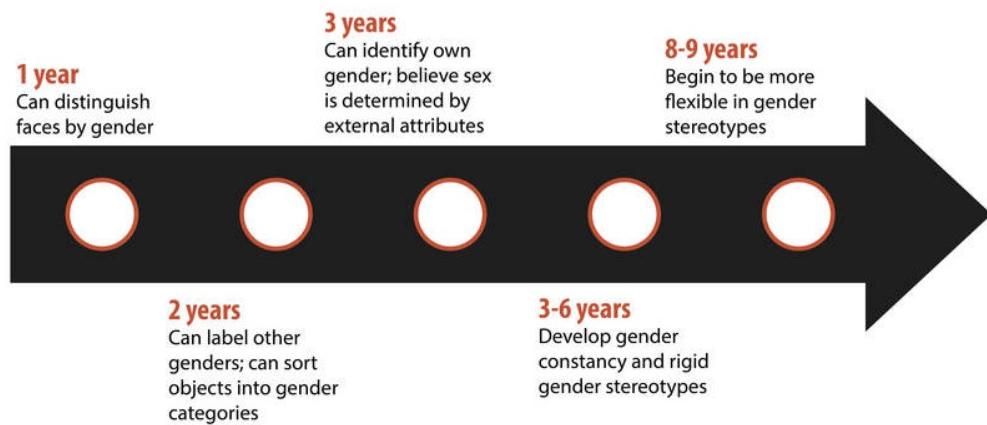
Figure 2: Children develop the ability to classify gender very early in life.

How do our gender roles and gender stereotypes develop and become so strong? Many of our gender stereotypes are so strong because we emphasize gender so much in culture (Bigler & Liben, 2007). For example, males and females are treated differently before they are even born. When someone learns of a new pregnancy, the first question asked is "Is it a boy or a girl?" Immediately upon hearing the answer, judgments are made about the child: Boys will be rough and like blue, while girls will be delicate and like pink. **Developmental intergroup theory** postulates that adults' heavy focus on gender leads children to pay attention to gender as a key source of information about themselves and others, to seek out any possible gender differences, and to form rigid stereotypes based on gender that are subsequently difficult to change.

There are also psychological theories that partially explain how children form their own gender roles after they learn to differentiate based on gender. The first of these theories is gender schema theory. Gender schema theory argues that children are active learners who essentially socialize themselves. In this case, children actively organize others' behavior, activities, and attributes into gender categories, which are known as schemas. These schemas then affect what children notice and remember later. People of all ages are more likely to remember schema-consistent behaviors and attributes than schema-inconsistent behaviors and attributes. So, people are more likely to remember men, and forget women, who are firefighters. They also misremember schema-inconsistent information.

People are more likely to remember schema-consistent behaviors and attributes than schema-inconsistent behaviors and attributes. For example, people are more likely to remember men, and forget women, who are firefighters. [Photo: Billy V, https://goo.gl/Kb2MuL, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

If research participants are shown pictures of someone standing at the stove, they are more likely to remember the person to be cooking if depicted as a woman, and the person to be repairing the stove if depicted as a man. By only remembering schema-consistent information, gender schemas strengthen more and more over time.

A second theory that attempts to explain the formation of gender roles in children is social learning theory. Social learning theory argues that gender roles are learned through reinforcement, punishment, and modeling. Children are rewarded and reinforced for behaving in concordance with gender roles and punished for breaking gender roles. In addition, social learning theory argues that children learn many of their gender roles by modeling the behavior of adults and older children and, in doing so, develop ideas about what behaviors are appropriate for each gender. Social learning theory has less support than gender schema theory—research shows that parents do reinforce gender-appropriate play, but for the most part treat their male and female children similarly (Lytton & Romney, 1991).

Gender Sexism and Socialization

Treating boys and girls, and men and women, differently is both a *consequence* of gender

differences and a *cause* of gender differences. Differential treatment on the basis of gender is also referred to <u>gender discrimination</u> and is an inevitable consequence of gender stereotypes. When it is based on unwanted treatment related to sexual behaviors or appearance, it is called <u>sexual harassment</u>. By the time boys and girls reach the end of high school, most have experienced some form of sexual harassment, most commonly in the form of unwanted touching or comments, being the target of jokes, having their body parts rated, or being called names related to sexual orientation.

Different treatment by gender begins with parents. A meta-analysis of research from the United States and Canada found that parents most frequently treated sons and daughters differently by encouraging gender-stereotypical activities (Lytton & Romney, 1991). Fathers, more than mothers, are particularly likely to encourage gender-stereotypical play, especially in sons. Parents also talk to their children differently based on stereotypes. For example, parents talk about numbers and counting twice as often with sons than daughters (Chang, Sandhofer, & Brown, 2011) and talk to sons in more detail about science than with daughters. Parents are also much more likely to discuss emotions with their daughters than their sons.

Children do a large degree of socializing themselves. By age 3, children play in gender-segregated play groups and expect a high degree of conformity. Children who are perceived as gender atypical (i.e., do not conform to gender stereotypes) are more likely to be bullied and rejected than their more gender-conforming peers.

Gender stereotypes typically maintain gender inequalities in society. The concept of <u>ambivalent sexism</u> recognizes the complex nature of gender attitudes, in which women are often associated with positive and negative qualities (Glick & Fiske, 2001). It has two components. First, <u>hostile sexism</u> refers to the negative attitudes of women as inferior and incompetent relative to men. Second, <u>benevolent sexism</u> refers to the perception that women need to be protected, supported, and adored by men. There has been considerable empirical support for benevolent sexism, possibly because it is seen as more socially acceptable than hostile sexism. Gender stereotypes are found not just in American culture. Across cultures, males tend to be associated with stronger and more active characteristics than females (Best, 2001).

In recent years, gender and related concepts have become a common focus of social change and social debate. Many societies, including American society, have seen a rapid change in perceptions of gender roles, media portrayals of gender, and legal trends relating to gender. For example, there has been an increase in children's toys attempting to cater to both genders (such as Legos marketed to girls), rather than catering to traditional stereotypes. Nationwide, the drastic surge in acceptance of homosexuality and gender questioning has resulted in a

rapid push for legal change to keep up with social change. Laws such as "Don't Ask, Don't Tell" and the Defense of Marriage Act (DOMA), both of which were enacted in the 1990s, have met severe resistance on the grounds of being discriminatory toward sexual minority groups and have been accused of unconstitutionality less than 20 years after their implementation. Change in perceptions of gender is also evident in social issues such as sexual harassment, a term that only entered the mainstream mindset in the 1991 Clarence Thomas/Anita Hill scandal. As society's gender roles and gender restrictions continue to fluctuate, the legal system and the structure of American society will continue to change and adjust.

Important Gender-related Events in the United States

1920 -- *19th Amendment* (women's Suffrage Ratified)

1941-1945 -- World War II forces millions of women to enter the workforce

1948 -- Universal Declaration of Human Rights

1963 -- Congress passes *Equal Pay Act*

1964 -- Congress passes *Civil Rights Act*, which outlaws sex discrimination

1969 -- Stonewall riots in NYC, forcing gay rights into the American spotlight

1972 --Congress passes *Equal Rights Amendment*; *TitleIX* prohibits sex discrimination is schools and sports

1973 -- American Psychiatric Association removes homosexuality from the DSM

1981 -- First woman appointed to the US Supreme Court

1987 -- Average woman earned $0.68 for every $1.00 earned by a man

1992 -- World Health Organization no longer considers homosexuality an illness

1993 -- Supreme Court rules that sexual harassment in the workplace is illegal

2011 -- *Don't Ask Don't Tell* is repealed, allowing people who identify as gay serve openly in the US military

2012 -- President Barack Obama becomes the first American president to openly support LGBT rights and marriage equality

Outside Resources

PFLAG National Glossary of Terms
https://pflag.org/glossary

Resources for Transgender, Non-binary, and Gender Non-Conforming Individuals and their Allies
https://sites.sph.harvard.edu/unity/resources-transgender/

Video: Human Sexuality is Complicated
http://www.youtube.com/watch?v=xXAoG8vAyzI

Web: Big Think with Professor of Neuroscience Lise Eliot
http://bigthink.com/users/liseeliot

Web: Understanding Prejudice: Sexism
http://www.understandingprejudice.org/links/sexism.htm

Discussion Questions

1. What are the differences and associations among gender, sex, gender identity, and sexual orientation?

2. Are the gender differences that exist innate (biological) differences or are they caused by other variables?

3. Discuss the theories relating to the development of gender roles and gender stereotypes. Which theory do you support? Why?

4. Using what you've read in this module: a. Why do you think gender stereotypes are so inflated compared with actual gender differences? b. Why do you think people continue to believe in such strong gender differences despite evidence to the contrary?

5. Brainstorm additional forms of gender discrimination aside from sexual harassment. Have you seen or experienced gender discrimination personally?

6. How is benevolent sexism detrimental to women, despite appearing positive?

Vocabulary

Agender
An individual who may have no gender or may describe themselves as having a neutral gender.

Ambivalent sexism
A concept of gender attitudes that encompasses both positive and negative qualities.

Benevolent sexism
The "positive" element of ambivalent sexism, which recognizes that women are perceived as needing to be protected, supported, and adored by men.

Bigender
An individual who identifies as two genders.

Binary
The idea that gender has two separate and distinct categories (male and female) and that a person must be either one or the other.

Cisgender
A term used to describe individuals whose gender matches their biological sex.

Developmental intergroup theory
A theory that postulates that adults' focus on gender leads children to pay attention to gender as a key source of information about themselves and others, to seek out possible gender differences, and to form rigid stereotypes based on gender.

Gender
The cultural, social, and psychological meanings that are associated with masculinity and femininity.

Gender constancy
The awareness that gender is constant and does not change simply by changing external attributes; develops between 3 and 6 years of age.

Gender discrimination
Differential treatment on the basis of gender.

Gender identity
A person's psychological sense of being male or female.

Gender roles
The behaviors, attitudes, and personality traits that are designated as either masculine or feminine in a given culture.

Gender schema theory
This theory of how children form their own gender roles argues that children actively organize others' behavior, activities, and attributes into gender categories or schemas.

Gender stereotypes
The beliefs and expectations people hold about the typical characteristics, preferences, and behaviors of men and women.

Genderfluid
An individual who may identify as male, female, both, or neither at different times and in different circumstances.

Genderqueer or gender nonbinary
An umbrella term used to describe a wide range of individuals who do not identify with and/or conform to the gender binary.

Hostile sexism
The negative element of ambivalent sexism, which includes the attitudes that women are inferior and incompetent relative to men.

Schemas
The gender categories into which, according to gender schema theory, children actively organize others' behavior, activities, and attributes.

Sex
Biological category of male or female as defined by physical differences in genetic composition and in reproductive anatomy and function.

Sexual harassment
A form of gender discrimination based on unwanted treatment related to sexual behaviors or appearance.

Sexual orientation
Refers to the direction of emotional and erotic attraction toward members of the opposite sex, the same sex, or both sexes.

Social learning theory
This theory of how children form their own gender roles argues that gender roles are learned through reinforcement, punishment, and modeling.

Transgender
A term used to describe individuals whose gender does not match their biological sex.

References

Barnett, B. S., Nesbit, A. E., & Sorrentino, R. M. (2018). The transgender bathroom debate at the intersection of politics, law, ethics, and science. *The Journal of the American Academy of Psychiatry and the Law, 46*(2), 232-241.

Best, D. L. (2001). Gender concepts: Convergence in cross-cultural research and methodologies. Cross-Cultural Research: *The Journal of Comparative Social Science, 35(1)*, 23–43. doi: 10.1177/106939710103500102

Bigler, R. S., & Liben, L. S. (2007). Developmental intergroup theory: Explaining and reducing children\'s social stereotyping and prejudice. *Current Directions in Psychological Science, 16 (3)*, 162–166. doi: 10.1111/j.1467-8721.2007.00496.x

Chang, A. Sandhofer, C., & Brown, C. S. (2011). Gender biases in early number exposure to preschool-aged children. *Journal of Language and Social Psychology*. doi: 10.1177/0261927X11416207

Else-Quest, N. M., Hyde, J. S., Goldsmith, H. H., & Van Hulle, C. A. (2006). Gender differences in temperament: A meta-analysis. *Psychological Bulletin, 132(1)*, 33–72. doi: 10.1037/0033-2909.132.1.33

Flores, A.R., Herman, J.L., Gates, G.J., & Brown, T.N.T. (2016). *How Many Adults Identify as Transgender in the United States?* Los Angeles, CA: The Williams Institute.

Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist, 56(2)*, 109–118. doi: 10.1037/0003-066X.56.2.109

Hyde, J. S. (2005). The gender similarities hypothesis. *American Psychologist, 60(6)*, 581–592. doi: 10.1037/0003-066X.60.6.581

Leaper, C., & Smith, T. E. (2004). A meta-analytic review of gender variations in children's language use: Talkativeness, affiliative speech, and assertive speech. *Developmental Psychology, 40(6)*, 993–1027. doi: 10.1037/0012-1649.40.6.993

Lytton, H., & Romney, D. M. (1991). Parents' differential socialization of boys and girls: A meta-analysis. *Psychological Bulletin, 109(2)*, 267–296. doi: 10.1037/0033-2909.109.2.267

Maccoby, E. E. (1998). *The two sexes: Growing up apart, coming together*. Cambridge, MA: Belknap Press/Harvard University Press.

Martin, C. L., Ruble, D. N., & Szkrybalo, J. (2002). Cognitive theories of early gender development. *Psychological Bulletin, 128(6)*, 903–933. doi: 10.1037/0033-2909.128.6.903

Tzuriel, D., & Egozi, G. (2010). Gender differences in spatial ability of young children: The effects of training and processing strategies. *Child Development, 81(5)*, 1417–1430. doi: 10.1111/

j.1467-8624.2010.01482.x

Wood, W., & Eagly, A. H. (2002). A cross-cultural analysis of the behavior of women and men: Implications for the origins of sex differences. *Psychological Bulletin, 128(5)*, 699–727. doi: 10.1037/0033-2909.128.5.699

Indigenous Psychology

12
Culture

Robert Biswas-Diener & Neil Thin

Although the most visible elements of culture are dress, cuisine and architecture, culture is a highly psychological phenomenon. Culture is a pattern of meaning for understanding how the world works. This knowledge is shared among a group of people and passed from one generation to the next. This module defines culture, addresses methodological issues, and introduces the idea that culture is a process. Understanding cultural processes can help people get along better with others and be more socially responsible.

Learning Objectives

- Appreciate culture as an evolutionary adaptation common to all humans.
- Understand cultural processes as variable patterns rather than as fixed scripts.
- Understand the difference between cultural and cross-cultural research methods.
- Appreciate cultural awareness as a source of personal well-being, social responsibility, and social harmony.
- Explain the difference between individualism and collectivism.
- Define "self-construal" and provide a real life example.

Introduction

When you think about different cultures, you likely picture their most visible features, such as differences in the way people dress, or in the architectural styles of their buildings. You

might consider different types of food, or how people in some cultures eat with chopsticks while people in others use forks. There are differences in body language, religious practices, and wedding rituals. While these are all obvious examples of cultural differences, many distinctions are harder to see because they are psychological in nature.

Culture goes beyond the way people dress and the food they eat. It also stipulates morality, identity, and social roles. [Image: Faizal Riza MOHD RAF, https://goo.gl/G7cbZh, CC BY-NC 2.0, https://goo.gl/VnKlK8]

Just as culture can be seen in dress and food, it can also be seen in morality, identity, and gender roles. People from around the world differ in their views of premarital sex, religious tolerance, respect for elders, and even the importance they place on having fun. Similarly, many behaviors that may seem innate are actually products of culture. Approaches to punishment, for example, often depend on cultural norms for their effectiveness. In the United States, people who ride public transportation without buying a ticket face the possibility of being fined. By contrast, in some other societies, people caught dodging the fare are socially shamed by having their photos posted publicly. The reason this campaign of "name and shame" might work in one society but not in another is that members of different cultures differ in how comfortable they are with being singled out for attention. This strategy is less effective for people who are not as sensitive to the threat of public shaming.

The psychological aspects of culture are often overlooked because they are often invisible. The way that gender roles are learned is a cultural process as is the way that people think about their own sense of duty toward their family members. In this module, you will be introduced to one of the most fascinating aspects of social psychology: the study of cultural processes. You will learn about research methods for studying culture, basic definitions related to this topic, and about the ways that culture affects a person's sense of self.

Social Psychology Research Methods

Social psychologists are interested in the ways that cultural forces influence psychological

processes. They study culture as a means of better understanding the ways it affects our emotions, identity, relationships, and decisions. Social psychologists generally ask different types of questions and use different methods than do anthropologists. Anthropologists are more likely to conduct **ethnographic studies**. In this type of research, the scientist spends time observing a culture and conducting interviews. In this way, anthropologists often attempt to understand and appreciate culture from the point of view of the people within it. Social psychologists who adopt this approach are often thought to be studying **cultural psychology**. They are likely to use interviews as a primary research methodology.

For example, in a 2004 study Hazel Markus and her colleagues wanted to explore class culture as it relates to well-being. The researchers adopted a cultural psychology approach and interviewed participants to discover—in the participants own words—what "the good life" is for Americans of different social classes. Dozens of participants answered 30 **open ended questions** about well-being during recorded, face-to-face interviews. After the interview data were collected the researchers then read the transcripts. From these, they agreed on common themes that appeared important to the participants. These included, among others, "health," "family," "enjoyment," and "financial security."

The Markus team discovered that people with a Bachelor's Degree were more likely than high school educated participants to mention "enjoyment" as a central part of the good life. By contrast, those with a high school education were more likely to mention "financial security" and "having basic needs met." There were similarities as well: participants from both groups placed a heavy emphasis on relationships with others. Their understanding of *how* these relationships are tied to well-being differed, however. The college educated—especially men —were more likely to list "advising and respecting" as crucial aspects of relationships while their high school educated counterparts were more likely to list "loving and caring" as important. As you can see, cultural psychological approaches place an emphasis on the participants' own definitions, language, and understanding of their own lives. In addition, the

	Ethnographic Study	**Cross-Cultural Study**
Advantages	Culturally sensitive, studies people in their natural environments	Able to make comparisons between groups
Disadvantages	Difficult to make comparisons between cultures	Vulnerable to ethnocentric bias

Table 1: Summary of advantages and disadvantages of ethnographic study and cross-cultural study.

researchers were able to make comparisons between the groups, but these comparisons were based on loose themes created by the researchers.

Cultural psychology is distinct from **cross-cultural psychology**, and this can be confusing. **Cross-cultural studies** are those that use standard forms of measurement, such as Likert scales, to compare people from different cultures and identify their differences. Both cultural and cross-cultural studies have their own advantages and disadvantages (see Table 1).

Interestingly, researchers—and the rest of us!—have as much to learn from **cultural similarities** as **cultural differences**, and both require comparisons across cultures. For example, Diener and Oishi (2000) were interested in exploring the relationship between money and happiness. They were specifically interested in cross-cultural differences in levels of life satisfaction between people from different cultures. To examine this question they used international surveys that asked all participants the exact same question, such as "All things considered, how satisfied are you with your life as a whole these days?" and used a **standard scale** for answers; in this case one that asked people to use a 1-10 scale to respond. They also collected data on average income levels in each nation, and adjusted these for local differences in how many goods and services that money can buy.

The Diener research team discovered that, across more than 40 nations there was a tendency for money to be associated with higher life satisfaction. People from richer countries such as Denmark, Switzerland and Canada had relatively high satisfaction while their counterparts from poorer countries such as India and Belarus had lower levels. There were some interesting exceptions, however. People from Japan—a wealthy nation—reported lower satisfaction than did their peers in nations with similar wealth. In addition, people from Brazil—a poorer nation —had unusually high scores compared to their income counterparts.

One problem with cross-cultural studies is that they are vulnerable to **ethnocentric bias**. This means that the researcher who designs the study might be influenced by personal biases that could affect research outcomes—without even being aware of it. For example, a study on happiness across cultures might investigate the ways that personal freedom is associated with feeling a sense of purpose in life. The researcher might assume that when people are free to choose their own work and leisure, they are more likely to pick options they care deeply about. Unfortunately, this researcher might overlook the fact that in much of the world it is considered important to sacrifice some personal freedom in order to fulfill one's duty to the group (Triandis, 1995). Because of the danger of this type of bias, social psychologists must continue to improve their methodology.

What is Culture?

Defining Culture

Like the words "happiness" and "intelligence," the word "culture" can be tricky to define. **Culture** is a word that suggests *social patterns of shared meaning*. In essence, it is a collective understanding of the way the world works, shared by members of a group and passed down from one generation to the next. For example, members of the Yanomamö tribe, in South America, share a cultural understanding of the world that includes the idea that there are four parallel levels to reality that include an abandoned level, and earthly level and heavenly and hell-like levels. Similarly, members of surfing culture understand their athletic pastime as being worthwhile and governed by formal rules of etiquette known only to insiders. There are several features of culture that are central to understanding the uniqueness and diversity of the human mind:

1. *Versatility*: Culture can change and adapt. Someone from the state of Orissa, in India, for example, may have multiple identities. She might see herself as Oriya when at home and speaking her native language. At other times, such as during the national cricket match against Pakistan, she might consider herself Indian. This is known as **situational identity**.

2. *Sharing*: Culture is the product of people sharing with one another. Humans cooperate and share knowledge and skills with other members of their networks. The ways they share, and the content of what they share, helps make up culture. Older adults, for instance, remember a time when long-distance friendships were maintained through letters that arrived in the mail every few months. Contemporary youth culture accomplishes the same goal through the use of instant text messages on smart phones.

3. *Accumulation*: Cultural knowledge is cumulative. That is, information is "stored." This means that a culture's collective learning grows across generations. We understand more about the world today than we did 200 years ago, but that doesn't mean the culture from long ago has been erased by the new. For instance, members of the Haida culture—a First Nations people in British Columbia, Canada—profit from both ancient and modern experiences. They might employ traditional fishing practices and wisdom stories while also using modern technologies and services.

4. *Patterns*: There are systematic and predictable ways of behavior or thinking across members of a culture. Patterns emerge from adapting, sharing, and storing cultural information. Patterns can be both similar and different across cultures. For example, in both Canada and India it is considered polite to bring a small gift to a host's home. In Canada, it is more common to bring a bottle of wine and for the gift to be opened right away. In India, by contrast, it is more common to bring sweets, and often the gift is set aside to be opened later.

Understanding the changing nature of culture is the first step toward appreciating how it helps people. The concept of <u>cultural intelligence</u> is the ability to understand why members of other cultures act in the ways they do. Rather than dismissing foreign behaviors as weird, inferior, or immoral, people high in cultural intelligence can appreciate differences even if they do not necessarily share another culture's views or adopt its ways of doing things.

Thinking about Culture

One of the biggest problems with understanding culture is that the word itself is used in different ways by different people. When someone says, "My company has a competitive culture," does it mean the same thing as when another person says, "I'm taking my children to the museum so they can get some culture"? The truth is, there are many ways to think about culture. Here are three ways to parse this concept:

1. *Progressive cultivation*: This refers to a relatively small subset of activities that are intentional and aimed at "being refined." Examples include learning to play a musical instrument, appreciating visual art, and attending theater performances, as well as other instances of so-called "high art." This was the predominant use of the word culture through the mid-19th century. This notion of culture formed the basis, in part, of a superior mindset on the behalf of people from the upper economic classes. For instance, many tribal groups were seen as lacking cultural sophistication under this definition. In the late 19th century, as global travel began to rise, this understanding of culture was largely replaced with an understanding of it as a way of life.

2. *Ways of Life*: This refers to distinct patterns of beliefs and behaviors widely shared among members of a culture. The "ways of life" understanding of culture shifts the emphasis to patterns of belief and behavior that persist over many generations. Although cultures can be small—such as "school culture"—they usually describe larger populations, such as nations. People occasionally confuse national identity with culture. There are similarities in culture between Japan, China, and Korea, for example, even though politically they are very different. Indeed, each of these nations also contains a great deal of cultural variation within themselves.

3. *Shared Learning*: In the 20th century, anthropologists and social psychologists developed the concept of <u>enculturation</u> to refer to the ways people learn about and shared cultural knowledge. Where "ways of life" is treated as a noun "enculturation" is a verb. That is, enculturation is a fluid and dynamic process. That is, it emphasizes that culture is a process that can be learned. As children are raised in a society, they are taught how to behave according to regional cultural norms. As immigrants settle in a new country, they learn a new set of rules for behaving and interacting. In this way, it is possible for a person to have

multiple cultural scripts.

Culture Concept	Examples	Social Impact	Highlighted Themes
Progressive Cultivation	• College education • Advanced technology • Ballet • Formal etiquette	A distinction between elites and the masses, between "higher civilizations" and "barbarians," between old and young, or between men and women	Deliberate pursuit of mental refinement; efforts to create and improve abilities that seem to offer better prospects of wellbeing, power, or dignity
Way of Life	• National traditions • Religious doctrines • Organizational culture	Geographical or ethnic distinctions between large and spatially segregated populations	Similar beliefs and values within populations, but differences between them; strong cultural identity and stereotyping of out-group members; stability of culture over time
Shared Learning and Enculturation	• Parenting • Teaching • Apprenticeship • Information-sharing and influencing through social networks	Emphasis on the developmental potential of everyone and on the different ways in which individuals develop, depending on different forms of enculturation	An understanding of diversity within populations, individual exposure to multiple cultural influences, negotiation and debating about cultural values and identities.

Table 2: Culture concepts and their application

The understanding of culture as a learned pattern of views and behaviors is interesting for several reasons. First, it highlights the ways groups can come into conflict with one another. Members of different cultures simply learn different ways of behaving. Modern youth culture, for instance, interacts with technologies such as smart phones using a different set of rules than people who are in their 40s, 50s, or 60s. Older adults might find texting in the middle of a face-to-face conversation rude while younger people often do not. These differences can sometimes become politicized and a source of tension between groups. One example of this is Muslim women who wear a *hijab*, or head scarf. Non-Muslims do not follow this practice, so occasional misunderstandings arise about the appropriateness of the tradition. Second, understanding that culture is learned is important because it means that people can adopt an appreciation of patterns of behavior that are different than their own. For example, non-Muslims might find it helpful to learn about the hijab. Where did this tradition come from? What does it mean and what are various Muslim opinions about wearing one? Finally, understanding that culture is learned can be helpful in developing self-awareness. For instance, people from the United States might not even be aware of the fact that their attitudes about public nudity are influenced by their cultural learning. While women often go topless on beaches in Europe and women living a traditional tribal existence in places like the South Pacific also go topless, it is illegal for women in some of the United States to do so. These cultural norms for modesty—reflected in government laws and policies-- also enter the discourse on social issues such as the appropriateness of breast-feeding in public.

Understanding that your preferences are—in many cases—the products of cultural learning might empower you to revise them if doing so will lead to a better life for you or others.

The Self and Culture

Traditionally, social psychologists have thought about how patterns of behavior have an overarching effect on populations' attitudes. Harry Triandis, a cross-cultural psychologist, has studied culture in terms of individualism and collectivism. Triandis became interested in culture because of his unique upbringing. Born in Greece, he was raised under both the German and Italian occupations during World War II. The Italian soldiers broadcast classical music in the town square and built a swimming pool for the townspeople. Interacting with these foreigners—even though they were an occupying army—sparked Triandis' curiosity about other cultures. He realized that he would have to learn English if he wanted to pursue academic study outside of Greece and so he practiced with the only local who knew the language: a mentally ill 70 year

In a world that is increasingly connected by travel, technology, and business the ability to understand and appreciate the differences between cultures is more important than ever. Psychologists call this capability "cultural intelligence". [Image: https://goo.gl/SkXR07, CC0 Public Domain, https://goo.gl/m25gce]

old who was incarcerated for life at the local hospital. He went on to spend decades studying the ways people in different cultures define themselves (Triandis, 2008).

So, what exactly were these two patterns of culture Triandis focused on: individualism and collectivism? Individualists, such as most people born and raised in Australia or the United States, define themselves as individuals. They seek personal freedom and prefer to voice their own opinions and make their own decisions. By contrast, collectivists—such as most people born and raised in Korea or in Taiwan— are more likely to emphasize their connectedness to others. They are more likely to sacrifice their personal preferences if those preferences come in conflict with the preferences of the larger group (Triandis, 1995).

Both individualism and collectivism can further be divided into *vertical* and *horizontal* dimensions (Triandis, 1995). Essentially, these dimensions describe social status among

members of a society. People in vertical societies differ in status, with some people being more highly respected or having more privileges, while in horizontal societies people are relatively equal in status and privileges. These dimensions are, of course, simplifications.

Neither individualism nor collectivism is the "correct way to live." Rather, they are two separate patterns with slightly different emphases. People from individualistic societies often have more social freedoms, while collectivistic societies often have better social safety nets.

	Individualist	Collectivist
Vertical	People are unique; some distinguish themselves and enjoy higher status. **Example: United States**	People emphasize their connectedness and must do their duty; some enjoy higher status. **Example: Japan**
Horizontal	People are unique; most people have the same status. **Example: Denmark**	People emphasize their connectedness and work toward common goals; most people have the same status. **Example: Israeli kibbutz**

Table 3: Individualist and collectivist cultures

There are yet other ways of thinking about culture, as well. The cultural patterns of individualism and collectivism are linked to an important psychological phenomenon: the way that people understand themselves. Known as **self-construal**, this is the way people define the way they "fit" in relation to others. Individualists are more likely to define themselves in terms of an **independent self**. This means that people see themselves as A) being a unique individual with a stable collection of personal traits, and B) that these traits drive behavior. By contrast, people from collectivist cultures are more likely to identify with the **interdependent self**. This means that people see themselves as A) defined differently in each new social context and B) social context, rather than internal traits, are the primary drivers of behavior (Markus & Kitiyama, 1991).

What do the independent and interdependent self look like in daily life? One simple example can be seen in the way that people describe themselves. Imagine you had to complete the sentence starting with "I am.....". And imagine that you had to do this 10 times. People with an independent sense of self are more likely to describe themselves in terms of traits such as "I am honest," "I am intelligent," or "I am talkative." On the other hand, people with a more

interdependent sense of self are more likely to describe themselves in terms of their relation to others such as "I am a sister," "I am a good friend," or "I am a leader on my team" (Markus, 1977).

The psychological consequences of having an independent or interdependent self can also appear in more surprising ways. Take, for example, the emotion of anger. In Western cultures, where people are more likely to have an independent self, anger arises when people's personal wants, needs, or values are attacked or frustrated (Markus & Kitiyama, 1994). Angry Westerners sometimes complain that they have been "treated unfairly." Simply put, anger—in the Western sense—is the result of violations of the self. By contrast, people from interdependent self cultures, such as Japan, are likely to experience anger somewhat differently. They are more likely to feel that anger is unpleasant not because of some personal insult but because anger represents a lack of harmony between people. In this instance, anger is particularly unpleasant when it interferes with close relationships.

Culture is Learned

It's important to understand that culture is learned. People aren't born using chopsticks or being good at soccer simply because they have a genetic predisposition for it. They learn to excel at these activities because they are born in countries like Argentina, where playing soccer is an important part of daily life, or in countries like Taiwan, where chopsticks are the primary eating utensils. So, how are such cultural behaviors learned? It turns out that cultural skills and knowledge are learned in much the same way a person might learn to do algebra or knit. They are acquired through a combination of explicit teaching and implicit learning—by observing and copying.

Cultural teaching can take many forms. It begins with parents and caregivers, because they are the primary influence on young children. Caregivers teach kids, both directly and by example, about how to behave and how the world works. They encourage children to be polite, reminding them, for instance, to say "Thankyou." They teach kids how to dress in a way that is appropriate for the culture. They introduce children to religious beliefs and the rituals that go with them. They even teach children how to think and feel! Adult men, for example, often exhibit a certain set of emotional expressions—such as being tough and not crying—that provides a model of masculinity for their children. This is why we see different ways of expressing the same emotions in different parts of the world.

In some societies, it is considered appropriate to conceal anger. Instead of expressing their feelings outright, people purse their lips, furrow their brows, and say little. In other cultures,

Culture teaches us what behaviors and emotions are appropriate or expected in different situations. [Image: Portal de Copa, https://goo.gl/iEoW6X, CC BY 3.0, https://goo.gl/b58TcB]

however, it is appropriate to express anger. In these places, people are more likely to bare their teeth, furrow their brows, point or gesture, and yell (Matsumoto, Yoo, & Chung, 2010). Such patterns of behavior are learned. Often, adults are not even aware that they are, in essence, teaching psychology—because the lessons are happening through **observational learning**.

Let's consider a single example of a way you behave that is learned, which might surprise you. All people gesture when they speak. We use our hands in fluid or choppy motions—to point things out, or to pantomime actions in stories. Consider how you might throw your hands up and exclaim, "I have no idea!" or how you might motion to a friend that it's time to go. Even people who are born blind use hand gestures when they speak, so to some degree this is a *universal behavior*, meaning all people naturally do it. However, social researchers have discovered that culture influences how a person gestures. Italians, for example, live in a society full of gestures. In fact, they use about 250 of them (Poggi, 2002)! Some are easy to understand, such as a hand against the belly, indicating hunger. Others, however, are more difficult. For example, pinching the thumb and index finger together and drawing a line backwards at face level means "perfect," while knocking a fist on the side of one's head means "stubborn."

Beyond observational learning, cultures also use **rituals** to teach people what is important. For example, young people who are interested in becoming Buddhist monks often have to endure rituals that help them shed feelings of specialness or superiority—feelings that run counter to Buddhist doctrine. To do this, they might be required to wash their teacher's feet, scrub toilets, or perform other menial tasks. Similarly, many Jewish adolescents go through the process of *bar* and *bat mitzvah*. This is a ceremonial reading from scripture that requires the study of Hebrew and, when completed, signals that the youth is ready for full participation in public worship.

Cultural Relativism

When social psychologists research culture, they try to avoid making value judgments. This is known as **value-free research** and is considered an important approach to scientific

objectivity. But, while such objectivity is the goal, it is a difficult one to achieve. With this in mind, anthropologists have tried to adopt a sense of empathy for the cultures they study. This has led to **cultural relativism**, the principle of regarding and valuing the practices of a culture from the point of view of that culture. It is a considerate and practical way to avoid hasty judgments. Take for example, the common practice of same-sex friends in India walking in public while holding hands: this is a common behavior and a sign of connectedness between two people. In England, by contrast, holding hands is largely limited to romantically involved couples, and often suggests a sexual relationship. These are simply two different ways of understanding the meaning of holding hands. Someone who does not take a *relativistic* view might be tempted to see their own understanding of this behavior as superior and, perhaps, the foreign practice as being immoral.

Despite the fact that cultural relativism promotes the appreciation for cultural differences, it can also be problematic. At its most extreme it leaves no room for criticism of other cultures, even if certain cultural practices are horrific or harmful. Many practices have drawn criticism over the years. In Madagascar, for example, the *famahidana* funeral tradition includes bringing bodies out from tombs once every seven years, wrapping them in cloth, and dancing with them. Some people view this practice as disrespectful to the body of a deceased person. Another example can be seen in the historical Indian practice of *sati*—the burning to death of widows on their deceased husband's funeral pyre. This practice was outlawed by the British when they colonized India. Today, a debate rages about the ritual cutting of genitals of children

In some cultures, it's perfectly normal for same-sex friends to hold hands while in others, handholding is restricted to romantically involved individuals only. [Image: Subharnab Majumdar, http://goo.gl/0Ghfof, CC BY-2.0, http://goo.gl/T4qgSp]

in several Middle Eastern and African cultures. To a lesser extent, this same debate arises around the circumcision of baby boys in Western hospitals. When considering harmful cultural traditions, it can be patronizing to the point of racism to use cultural relativism as an excuse for avoiding debate. To assume that people from other cultures are neither mature enough nor responsible enough to consider criticism from the outside is demeaning.

Positive cultural relativism is the belief that the world would be a better place if everyone practiced some form of intercultural empathy and respect. This approach offers a potentially important contribution to theories of cultural progress: to better understand human behavior, people should avoid adopting extreme views that block discussions about the basic morality or usefulness of cultural practices.

Conclusion

We live in a unique moment in history. We are experiencing the rise of a global culture in which people are connected and able to exchange ideas and information better than ever before. International travel and business are on the rise. Instantaneous communication and social media are creating networks of contacts who would never otherwise have had a chance to connect. Education is expanding, music and films cross national borders, and state-of-the-art technology affects us all. In this world, an understanding of what culture is and how it happens, can set the foundation for acceptance of differences and respectful disagreements. The science of social psychology—along with the other culture-focused sciences, such as anthropology and sociology—can help produce insights into cultural processes. These insights, in turn, can be used to increase the quality of intercultural dialogue, to preserve cultural traditions, and to promote self-awareness.

Outside Resources

Articles: International Association of Cross-Cultural Psychology (IACCP) [Wolfgang Friedlmeier, ed] Online Readings in Psychology and Culture (ORPC)
http://scholarworks.gvsu.edu/orpc/

Database: Human Relations Area Files (HRAF) 'World Cultures' database
http://hraf.yale.edu/

Organization: Plous, Scott, et al, Social Psychology Network, Cultural Psychology Links by Subtopic
https://www.socialpsychology.org/cultural.htm

Study: Hofstede, Geert et al, The Hofstede Center: Strategy, Culture, Change
http://geert-hofstede.com/national-culture.html

Discussion Questions

1. How do you think the culture you live in is similar to or different from the culture your parents were raised in?

2. What are the risks of associating "culture" mainly with differences between large populations such as entire nations?

3. If you were a social psychologist, what steps would you take to guard against ethnocentricity in your research?

4. Name one value that is important to you. How did you learn that value?

5. In your opinion, has the internet increased or reduced global cultural diversity?

6. Imagine a social psychologist who researches the culture of extremely poor people, such as so-called "rag pickers," who sort through trash for food or for items to sell. What ethical challenges can you identify in this type of study?

Vocabulary

Collectivism
The cultural trend in which the primary unit of measurement is the group. Collectivists are likely to emphasize duty and obligation over personal aspirations.

Cross-cultural psychology (or cross-cultural studies)
An approach to researching culture that emphasizes the use of standard scales as a means of making meaningful comparisons across groups.

Cross-cultural studies (or cross-cultural psychology)
An approach to researching culture that emphasizes the use of standard scales as a means of making meaningful comparisons across groups.

Cultural differences
An approach to understanding culture primarily by paying attention to unique and distinctive features that set them apart from other cultures.

Cultural intelligence
The ability and willingness to apply cultural awareness to practical uses.

Cultural psychology
An approach to researching culture that emphasizes the use of interviews and observation as a means of understanding culture from its own point of view.

Cultural relativism
The principled objection to passing overly culture-bound (i.e., "ethnocentric") judgements on aspects of other cultures.

Cultural script
Learned guides for how to behave appropriately in a given social situation. These reflect cultural norms and widely accepted values.

Cultural similarities
An approach to understanding culture primarily by paying attention to common features that are the same as or similar to those of other cultures

Culture

A pattern of shared meaning and behavior among a group of people that is passed from one generation to the next.

Enculturation
The uniquely human form of learning that is taught by one generation to another.

Ethnocentric bias (or ethnocentrism)
Being unduly guided by the beliefs of the culture you've grown up in, especially when this results in a misunderstanding or disparagement of unfamiliar cultures.

Ethnographic studies
Research that emphasizes field data collection and that examines questions that attempt to understand culture from it's own context and point of view.

Independent self
The tendency to define the self in terms of stable traits that guide behavior.

Individualism
The cultural trend in which the primary unit of measurement is the individual. Individualists are likely to emphasize uniqueness and personal aspirations over social duty.

Interdependent self
The tendency to define the self in terms of social contexts that guide behavior.

Observational learning
Learning by observing the behavior of others.

Open ended questions
Research questions that ask participants to answer in their own words.

Ritual
Rites or actions performed in a systematic or prescribed way often for an intended purpose. Example: The exchange of wedding rings during a marriage ceremony in many cultures.

Self-construal
The extent to which the self is defined as independent or as relating to others.

Situational identity
Being guided by different cultural influences in different situations, such as home versus

workplace, or formal versus informal roles.

Standard scale
Research method in which all participants use a common scale—typically a Likert scale—to respond to questions.

Value judgment
An assessment—based on one's own preferences and priorities—about the basic "goodness" or "badness" of a concept or practice.

Value-free research
Research that is not influenced by the researchers' own values, morality, or opinions.

References

Diener, E. & Oishi, S. (2000). Money and happiness: Income and subjective well-being across nations. In E. Diener & E.M. Suh (Eds), *Culture and subjective well-being*, Cambrdige, MA: MIT Press.

Markus, H. (1977). Self-schemata and processing information about the self. *Journal of Personality and Social Psychology*, 35, 63-78.

Markus, H. & Kitiyama, S (1994).The cultural construction of self and emotion: Implications for social behavior. In S. Kitiyama & H. Markus (Eds), *Emotion and Culture: Empirical studies of mutual influence*. Washington, DC: American Psychological Association.

Markus, H. & Kitiyama, S (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review*, 98, 224-253.

Markus, H., Ryff, C., Curhan, K. & Palmersheim, K. (2004). In their own words: Well-being at midlife among high school and college educated adults. In O.G. Brim & C. Ryff (Eds), *How healthy are we? A national study of well-being at midlife*. Chicago: University of Chicago Press.

Matsumoto, D., Yoo, S. H., & Chung, J. (2010). The expression of anger across cultures. In M. Potegal, G. Stemmler, G., and C. Spielberger (Eds.) *International handbook of anger* (pp.125-137). New York, NY: Springer

Poggi, I. (2002). *Towards the alphabet and the lexicon of gesture, gaze and touch*. In Virtual Symposium on Multimodality of Human Communication. Retrieved from http://www.semioticon.com/virtuals/multimodality/geyboui41.pdf

Triandis, H. C. (2008). An autobiography: Why did culture shape my career. R. Levine, A. Rodrigues & L. Zelezny, L. (Eds.). *Journeys in social psychology: Looking back to inspire the future*. (pp.145-164). New York, NY: Taylor And Francis.

Triandis, H. C. (1995). *Individualism and collectivism*. Boulder, CO: Westview press.

Stress and Health

13
Positive Psychology

Robert A. Emmons

A brief history of the positive psychology movement is presented, and key themes within positive psychology are identified. Three important positive psychology topics are gratitude, forgiveness, and humility. Ten key findings within the field of positive psychology are put forth, and the most important empirical findings regarding gratitude, forgiveness, and humility are discussed. Assessment techniques for these three strengths are described, and interventions for increasing gratitude, developing forgiveness, and becoming more humble are briefly considered.

Learning Objectives

- Describe what positive psychology is, who started it, and why it came into existence.

- Identify some of the most important findings from the science of positive psychology with respect to forgiveness, gratitude, and humility.

- Explore how positive psychology might make a difference in how you think about your own life, the nature of human nature, and what is really important to you.

Introduction

Positive psychology is a popular movement that began in the late 1990's. It is the branch of psychology that has as its primary focus on the strengths, virtues, and talents that contribute to successful functioning and enable individuals and communities to flourish. Core topics include happiness, resiliency, well-being, and states of flow and engagement. It was

spearheaded by a former president of the American Psychological Association, Martin Seligman.

Martin Seligman, who is credited with starting the positive psychology movement, attributes the inspiration to his prior work on learned helplessness. New research prompted him to instead focus on the good in people's lives. [Image: Lotte Meijer, CC0 Public Domain, https://goo.gl/m25gce]

Throughout most of its history, psychology was concerned with identifying and remedying human ills. It has largely focused on decreasing maladaptive emotions and behaviors, while generally ignoring positive and optimal functioning. In contrast, the goal of positive psychology is to identify and enhance the human strengths and virtues that make life worth living. Unlike the positive thinking or new thought movements that are associated with people like Norman Vincent Peale or Rhonda Byrne (*The Secret*), positive psychology pursues scientifically informed perspectives on what makes life worth living. It is empirically based. It focuses on measuring aspects of the human condition that lead to happiness, fulfillment, and flourishing. The science of happiness is covered in other modules within this section of this book. Therefore, aside from key findings summarized in Table 1, the emphasis in this module will be on other topics within positive psychology.

Moving from an exclusive focus on distress, disorder, and dysfunction, positive psychology shifts the scientific lens to a concentration on well-being, health, and optimal functioning. Positive psychology provides a different vantage point through which to understand human experience. Recent developments have produced a common framework and that locates the study of positive states, strengths and virtues in relation to each other and links them to important life outcomes. Recent developments suggest that problems in psychological functioning may be more profitably dealt with as the absence, excess, or opposite of these strengths rather than traditional diagnostic categories of mental illness. The principal claim of positive psychology is that the study of health, fulfillment and well-being is as deserving of study as illness, dysfunction, and distress, has resonated well with both the academic community and the general public.

As a relatively new field of research, positive psychology lacked a common vocabulary for discussing measurable positive traits before 2004. Traditional psychology benefited from the creation of Diagnostic and Statistical Manual of Mental Disorders (DSM), which provided researchers and clinicians with the same set of language from which they could talk about the negative. As a first step in remedying this disparity between traditional and positive psychology, Chris Peterson and Martin Seligman set out to identify, organize and measure character. The Values in Action (VIA) classification of strengths was an important initial step toward specifying important positive traits (Peterson & Seligman, 2004). Peterson and Seligman examined ancient cultures (including their religions, politics, education and philosophies) for information about how people in the past construed human virtue. The researchers looked for virtues that were present across cultures and time. Six core virtues emerged from their analysis: courage, justice, humanity, temperance, transcendence and wisdom. The VIA is the positive psychology counterpart to the DSM used in traditional psychology and psychiatry. Unlike the DSM, which scientifically categorizes human deficits and disorders, the VIA classifies positive human strengths. This approach vastly departs from the medical model of traditional psychology, which focuses on fixing deficits. In contrast, positive psychologists emphasize that people should focus and build upon on what they are doing well.

The VIA is a tool by which people can identify their own **character strengths** and learn how to capitalize on them. It consists of 240 questions that ask respondents to report the degree to which statements reflecting each of the strengths apply to themselves. For example, the character strength of hope is measured with items that include "I know that I will succeed with the goals I set for myself." The strength of **gratitude** is measured with such items as "At least once a day, I stop and count my blessings."

Within the United States, the most commonly endorsed strengths are kindness, fairness, honesty, gratitude and judgment (Park, Peterson & Seligman, 2006). Worldwide, the following strengths were most associated with positive life satisfaction: hope, zest, gratitude and love. The researchers called these strengths of the heart. Moreover, strengths associated with knowledge, such as love of learning and curiosity, were least correlated with life satisfaction (Park, Peterson & Seligman, 2005).

Three Key Strengths

Forgiveness, gratitude, and humility are three key strengths that have been the focus of sustained research programs within positive psychology. What have we learned about each of these and why do these matter for human flourishing?

Ten Key Findings from the Science of Positive Psychology	
1	Most people are happy
2	Happiness is a cause of good things in life and not simply a result of success or good outcomes. Happy people make good things happen.
3	Political conservatives are happier than political liberals.
4	Most people are resilient. They bounce back from adversity, large and small.
5	Happiness, strengths of character, and good social relationships are buffers against the damaging effects of disappointments and setbacks.
6	Religious faith matters. People for whom religion is important are happier and cope better with stress compared to non-believers.
7	Money makes an ever-diminishing contribution to well-being, but money can buy happiness if it is spent on other people.
8	As a route to a satisfying life, eudaimonia (a life of meaning) trumps hedonism (a life of pleasure).
9	Good days have common features: feeling autonomous, competent, and connected to others.
10	The good life can be taught.

Table 1: Ten Key Findings from the Science of Positive Psychology

Forgiveness

Forgiveness is essential to harmonious long-term relationships between individuals, whether between spouses or nations, dyads or collectives. At the level of the individual, forgiveness of self can help one achieve an inner peace as well as peace with others and with God. Wrongdoing against others can result in guilt, and self-loathing. Resentment can give away to hate and intolerance. Both perpetrator and victim suffer. Conversely, forgiveness can be an avenue to healing. It is the basic building block of loving relationships with others. When one person or nation does something to hurt another, the relationship between the two can be irrevocably damaged. Because the potential for conflict is seemingly built into human nature, the prospects for long-term peace may seem faint. Forgiveness offers another way. If the victim can forgive the perpetrator, the relationship may be restored and possibly even saved from termination. The essence of forgiveness is that it creates a possibility for a

relationship to recover from the damage caused by the offending party's offense. Forgiveness is thus a powerful pro-social process. It can benefit human social life by helping relationships to heal. , on the social level, forgiveness may be the critical element needed for world peace. Culligan (2002) wrote "Forgiveness may ultimately be the most powerful weapon for breaking the dreadful cycle of violence."

Research is answering fundamental questions about what forgiveness is and isn't, how it develops, what are its physiological correlates and physical effects, whether it is always beneficial, and how people—if they are so motivated—might be helped to forgive. Forgiveness is not excusing, condoning, tolerating, or

There is a famous quotation that does a good job of illustrating the importance of forgiveness: "Holding onto anger is like drinking poison and expecting the other person to die." [Image: CC0 Public Domain, https://goo.gl/m25gce]

forgetting that one has been hurt because of the actions of another. Forgiveness is letting go of negative thoughts (e.g. wishing the offender harm), negative behaviors (e.g. a desire to retaliate, and negative feelings (e.g. resentment) toward the offender (McCullough, Root, & Cohen, 2006).

There have been numerous studies looking at forgiveness interventions. The interventions involved counseling and exercises which were used to help people move from anger and resentment towards forgiveness. In one study, incest survivors who experienced the forgiveness intervention had at the end of the intervention increased abilities to forgive others, increased hopefulness and decreased levels of anxiety and depression. In another study, college students were randomized to a group that received a forgiveness education program and another group who studied human relations. The group that received the forgiveness education program showed higher levels of hope and an increased willingness to forgive others. This greater self-forgiveness was associated with increased self-esteem, lower levels of anxiety, lower levels of depression and a more positive view of their patient. In many of these studies, it was shown that people who are able to forgive are more likely to have better interpersonal functioning and therefore social support. The act of forgiveness can result in less anxiety and depression, better health outcomes, increased coping with stress, and increased closeness to God and others (Enright, 2001).

Gratitude

It is hard to feel sad when you're feeling grateful. Try to practice giving thanks, even for something small, every day. [Image: Trey Ratcliff, https://goo.gl/MKJUCl, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Gratitude is a feeling of appreciation or thankfulness in response to receiving a benefit. The emerging science of gratitude has produced some important findings. From childhood to old age, accumulating evidence documents the wide array of psychological, physical, and relational benefits associated with gratitude (Wood, Froh, & Geraghty, 2010). Gratitude is important not only because it helps us feel good, but also because it inspires us to do good. Gratitude heals, energizes, and transforms lives in a myriad of ways consistent with the notion that virtue is both its own reward and produces other rewards (Emmons, 2007).

To give a flavor of these research findings, dispositional gratitude has been found to be positively associated qualities such as empathy, forgiveness, and the willingness to help others. For example, people who rated themselves as having a grateful disposition perceived themselves as having more socially helpful characteristics, expressed by their empathetic behavior, and emotional support for friends within the last month (McCullough, Emmons, & Tsang, 2002). In our research, when people report feeling grateful, thankful, and appreciative in their daily lives, they also feel more loving, forgiving, joyful, and enthusiastic. Notably, the family, friends, partners and others who surround them consistently report that people who practice gratitude are viewed as more helpful, more outgoing, more optimistic, and more trustworthy (Emmons & McCullough, 2003).

Expressing gratitude for life's blessings – that is, a sense of wonder, thankfulness and appreciation– is likely to elevate happiness for a number of reasons. Grateful thinking fosters the savoring of positive life experiences and situations, so that people can extract the maximum possible satisfaction and enjoyment from their circumstances. Counting one's blessings may directly counteract the effects of hedonic adaptation, the process by which our happiness level returns, again and again, to its set range, by preventing people from taking

the good things in their lives for granted. If we consciously remind ourselves of our blessings, it should become harder to take them for granted and adapt to them. And the very act of viewing good things as gifts itself is likely to be beneficial for mood. How much does it matter? Consider these eye-popping statistics. People are 25% happier if they keep gratitude journals, sleep 1/2 hour more per evening, and exercise 33% more each week compared to persons who are not keeping journals. They achieve up to a 10% reduction in systolic blood pressure, and decrease their dietary fat intake by up to 20%. Lives marked by frequent positive emotions of joy, love and gratitude are up to 7 years longer than lives bereft of these pleasant feelings.

The science of gratitude has also revealed some surprising findings. For example, students who practice gratitude increase their grade point average. Occasional gratitude journaling boosts well-being more than the regular practice of counting blessings. Remembering one's sorrows, failures, and other painful experiences is more beneficial to happiness than recalling only successes. Becoming aware that a very pleasant experience is about to end enhances feelings of gratitude for it. Thinking about the absence of something positive in your life produces more gratitude and happiness than imagining its presence.

To assess your own level of gratefulness, take the test in Table 2.

Humility

What is humility and why does it matter? Although the etymological roots of humility are in lowliness and self-abasement (from the Latin term humilis meaning "lowly, humble," or literally "on the ground" and from the Latin term humus meaning "earth"), the emerging consensus among scholars is that humility is a psychological and intellectual virtue, or a character strength. There is no simple definition but it seems to involve the following elements: A clear and accurate (not underestimated) sense of one's abilities and achievements; the ability to acknowledge one's mistakes, imperfections, gaps in knowledge, and limitations (often with reference to a "higher power"); an

One aspect of humility is an awareness of the relatively little that one can really know about the world. [Image: Maria Svecova, CC0 Public Domain, https://goo.gl/m25gce]

How Grateful Are You? Test your Gratitude Quotient *(McCullough, Emmons, & Tsang, 2002)*

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neutral
5 = slightly agree
6 = agree
7 = strongly agree

Scoring Instructions:

A. Add up your scores for items 1, 2, 4, and 5.

B. Reverse your scores for items 3 and 6. That is, if you scored a "7," give your self a "1," if you scored a "6," give yourself a "2," etc.

C. Add the reversed scores for items 3 and 6 to the total from Step 1. This is your total GQ-6 score. This number should be between 6 and 42.

_____1. I have so much in life to be thankful for.

_____2. If I had to list everything that I felt grateful for, it would be a very long list.

_____3. When I look at the world, I don't see much to be grateful for.*

_____4. I am grateful to a wide variety of people.

_____5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.

_____6. Long amounts of time can go by before I feel grateful to something or someone.*

Interpreting your Score:

40-42: Extremely high gratitude. People who score in this range have the ability to see life as a gift. For you, gratitude is a way of life.

37-39: Very high gratitude. Your life contains frequent expressions of gratitude and you are able to readily acknowledge how others have helped you.

34-36: High gratitude. You are above average in gratitude and find it relatively easy to spend time reflecting on your blessings.

30-33: Average gratitude. You may find it easy being grateful when things are going well in your life; but may have difficulties maintaining a grateful outlook in tough times.

25-29: Below average gratitude. You find it challenging to find reasons for gratitude in your life. Life is more of a burden than a gift. Maybe you are just going through a difficult period.

Table 2: Your Gratitude Quotient

openness to new ideas, contradictory information, and advice keeping one's abilities and accomplishments in perspective; relatively low self-focus or an ability to "forget the self";

appreciation of the value of all things, as well as the many different ways that people and things can contribute to our world. In contemporary society, it is easy to overlook the merits of humility. In politics, business and sports, the egoists command our attention. In contrast, the primary message of this book is that the unassuming virtue of humility, rather than representing weakness or inferiority, as is commonly assumed, is a strength of character that produces positive, beneficial results for self and society. Successful people are humble people. They are more likely to flourish in life, in more domains, than are people who are less humble (Exline & Hill, 2012).

Do you think you are you a humble person? For obvious reasons, you cannot rate your own level of humility. It's an elusive concept to get at scientifically. "I am very humble" is self-contradictory. This has not discouraged personality psychologists from developing questionnaires to get at it, albeit indirectly. For example, to what extent do you identify with each of the following statements:

1. I generally have a good idea about the things I do well or do poorly.
2. I have difficulty accepting advice from other people.
3. I try my best in things, but I realize that I have a lot of work to do in many areas.
4. I am keenly aware of what little I know about the world.

Questions such as these tap various facets of the humble personality, including an appreciation and recognition of one's limitations, and an accurate assessment of oneself.

Humble people are more likely to flourish in life, in more domains, than are people who are less humble. Consider a handful of findings from recent research studies and surveys:

- People who say they feel humble when they are praised report that the experience made them want to be nice to people, increase their efforts, and challenge themselves
- Humble people are more admired and the trait of humility is viewed positively by most
- Humble teachers are rated as more effective and humble lawyers as more likeable by jurors
- CEO's who possessed a rare combination of extreme humility and strong professional will were catalysts for transforming a good company into a great one
- Over 80% of adults surveyed indicated that it is important that professionals demonstrate modesty/humility in their work
- Humility is positively associated with academic success in the form of higher grades (Exline & Hill, 2012).

The science of positive psychology has grown remarkably quickly since it first appeared on the scene in the late 1990's. Already, considerable progress has been made in understanding empirically the foundations of a good life. Knowledge from basic research in positive psychology is being applied in a number of settings, from psychotherapy to workplace settings to schools and even to the military (Biswas-Diener, 2011); A proper blend of science and practice will be required in order for positive psychology to fully realize its potential in dealing with the future challenges that we face as humans.

Outside Resources

Web: Authentic Happiness.
http://www.authentichappiness.sas.upenn.edu

Web: The International Positive Psychology Association (IPPA).
http://www.ippanetwork.org/

Discussion Questions

1. Can you think of people in your life who are very humble? What do they do or say that expresses their humility? To what extent do you think it would be good if you were more humble? To what extent do you think it would be good if you were less humble?

2. How can thinking gratefully about an unpleasant event from your past help you to deal positively with it? As the result of this event, what kinds of things do you now feel thankful or grateful for? How has this event benefited you as a person? How have you grown? Were there personal strengths that grew out of your experience?

3. Mahatma Gandhi once said, "The weak can never forgive. Forgiveness is the attribute of the strong." What do you think he meant by this? Do you agree or disagree? What are some of the obstacles you have faced in your own life when trying to forgive others?

Vocabulary

Character strength
A positive trait or quality deemed to be morally good and is valued for itself as well as for promoting individual and collective well-being.

Flourishing
To live optimally psychologically, relationally, and spiritually.

Forgiveness
The letting go of negative thoughts, feelings, and behaviors toward an offender.

Gratitude
A feeling of appreciation or thankfulness in response to receiving a benefit.

Humility
Having an accurate view of self—not too high or low—and a realistic appraisal of one's strengths and weaknesses, especially in relation to other people.

Positive psychology
The science of human flourishing. Positive Psychology is an applied science with an emphasis on real world intervention.

Pro-social
Thoughts, actions, and feelings that are directed towards others and which are positive in nature.

References

Biswas-Diener, R. (2011). Applied positive psychology: Progress and challenges. *European Health Psychologist, 13*, 24–26.

Culligan, K. (2002). Prayer and forgiveness: Can psychology help? Spiritual Life, 89,78. Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*, 377–389.

Emmons, R. A. (2007). *Thanks! How the new science of gratitude can make you happier.* Boston. MA: Houghton-Mifflin.

Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being in daily life. *Journal of Personality and Social Psychology, 84*, 377–389.

Enright, R. D. (2001). *Forgiveness is a choice.* Washington, DC: American Psychological Association.

Exline, J. J., & Hill, P. C. (2012). Humility: A consistent and robust predictor of generosity. *Journal of Positive Psychology, 7*, 208–218.

McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology, 82*, 112–127.

McCullough, M. E., Root, L. M., & Cohen A. D. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. *Journal of Consulting and Clinical Psychology, 74*, 887–897.

Park, N., Peterson, C., & Seligman, M. E. P. (2006). Character strengths in fifty-four nations and the fifty U.S. states. *The Journal of Positive Psychology, 3*, 118–129.

Park, N., Peterson, C., & Seligman, M. E. P. (2004). Strengths of character and well-being: A closer look at hope and modesty. *Journal of Social and Clinical Psychology, 23*, 603–619.

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press. Washington, DC: American Psychological Association.

Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review, 30*, 890–905.

14
The Healthy Life

Emily Hooker & Sarah Pressman

Our emotions, thoughts, and behaviors play an important role in our health. Not only do they influence our day-to-day health practices, but they can also influence how our body functions. This module provides an overview of health psychology, which is a field devoted to understanding the connections between psychology and health. Discussed here are examples of topics a health psychologist might study, including stress, psychosocial factors related to health and disease, how to use psychology to improve health, and the role of psychology in medicine.

Learning Objectives

- Describe basic terminology used in the field of health psychology.
- Explain theoretical models of health, as well as the role of psychological stress in the development of disease.
- Describe psychological factors that contribute to resilience and improved health.
- Defend the relevance and importance of psychology to the field of medicine.

What Is Health Psychology?

Today, we face more chronic disease than ever before because we are living longer lives while also frequently behaving in unhealthy ways. One example of a chronic disease is coronary heart disease (CHD): It is the number one cause of death worldwide (World Health Organization, 2013). CHD develops slowly over time and typically appears midlife, but related

heart problems can persist for years after the original diagnosis or cardiovascular event. In managing illnesses that persist over time (other examples might include cancer, diabetes, and long-term disability) many psychological factors will determine the progression of the ailment. For example, do patients seek help when appropriate? Do they follow doctor recommendations? Do they develop negative psychological symptoms due to lasting illness (e.g., depression)? Also important is that psychological factors can play a significant role in *who* develops these diseases, the prognosis, and the nature of the symptoms related to the illness. Health psychology is a relatively new, interdisciplinary field of study that focuses on these very issues, or more specifically, the role of psychology in maintaining health, as well as preventing and treating illness.

Consideration of how psychological and social factors influence health is especially important today because many of the leading causes of illness in developed countries are often attributed to psychological and behavioral factors. In the case of CHD, discussed above, psychosocial factors, such as excessive stress, smoking, unhealthy eating habits, and some personality traits can also lead to increased risk of disease and worse health outcomes. That being said, many of these factors can be adjusted using psychological techniques. For example, clinical health psychologists can improve health practices like poor dietary choices and smoking, they can teach important stress reduction techniques, and they can help treat psychological disorders tied to poor health. Health psychology considers how the choices we

Health psychologists are helping people to adapt behaviors to avoid disease, reduce stress, and improve overall health. [Image: Adelphi Lab Center, https://goo.gl/N9wXon, CC BY 2.0, https://goo.gl/BRvSA7]

make, the behaviors we engage in, and even the emotions that we feel, can play an important role in our overall health (Cohen & Herbert, 1996; Taylor, 2012).

Health psychology relies on the Biopsychosocial Model of Health. This model posits that biology, psychology, and social factors are just as important in the development of disease as biological causes (e.g., germs, viruses), which is consistent with the World Health Organization (1946) definition of health. This model replaces the older Biomedical Model of Health, which primarily considers the physical, or pathogenic, factors contributing to illness. Thanks to

advances in medical technology, there is a growing understanding of the physiology underlying the **mind–body connection**, and in particular, the role that different feelings can have on our body's function. Health psychology researchers working in the fields of **psychosomatic medicine** and **psychoneuroimmunology**, for example, are interested in understanding how psychological factors can "get under the skin" and influence our physiology in order to better understand how factors like stress can make us sick.

Stress And Health

You probably know exactly what it's like to feel stress, but what you may not know is that it can objectively influence your health. Answers to questions like, "How stressed do you feel?" or "How overwhelmed do you feel?" can predict your likelihood of developing both minor illnesses as well as serious problems like future heart attack (Cohen, Janicki-Deverts, & Miller, 2007). (Want to measure your own stress level? Check out the links at the end of the module.) To understand how health psychologists study these types of associations, we will describe one famous example of a stress and health study. Imagine that you are a research subject for a moment. After you check into a hotel room as part of the study, the researchers ask you to report your general levels of stress. Not too surprising; however, what happens next is that you receive droplets of *cold virus* into your nose! The researchers intentionally try to make you sick by exposing you to an infectious illness. After they expose you to the virus, the researchers will then evaluate you for several days by asking you questions about your symptoms, monitoring how much mucus you are producing by weighing your used tissues, and taking body fluid samples—all to see if you are objectively ill with a cold. Now, the
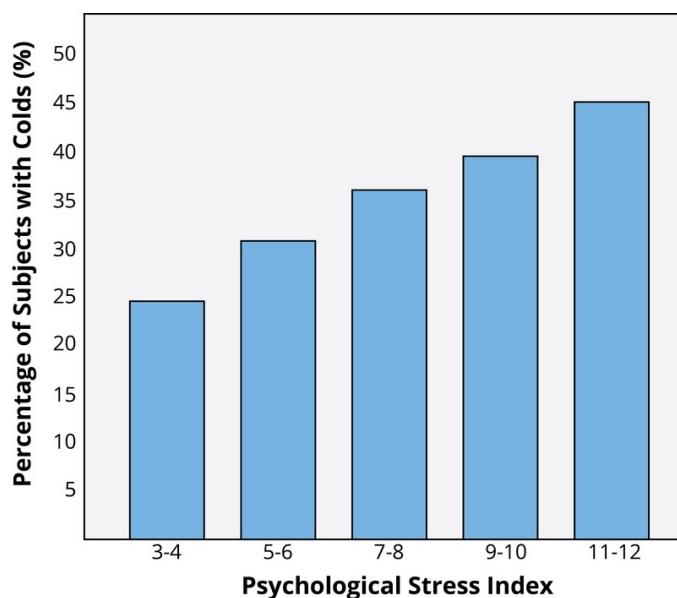
Figure 1: Adapted from Cohen et al. 1991

interesting thing is that not everyone who has drops of cold virus put in their nose develops the illness. Studies like this one find that people who are less stressed and those who are more positive at the beginning of the study are at a decreased risk of developing a cold (Cohen, Tyrrell, & Smith, 1991; Cohen, Alper, Doyle, Treanor, & Turner, 2006) (see Figure 1 for an example).

Importantly, it is not just major life **stressors** (e.g., a family death, a natural disaster) that increase the likelihood of getting sick. Even small **daily hassles** like getting stuck in traffic or fighting with your girlfriend can raise your blood pressure, alter your stress hormones, and even suppress your immune system function (DeLongis, Folkman, & Lazarus, 1988; Twisk, Snel, Kemper, & van Machelen, 1999).

It is clear that stress plays a major role in our mental and physical health, but what exactly is it? The term **stress** was originally derived from the field of mechanics where it is used to describe materials under pressure. The word was first used in a *psychological* manner by researcher Hans Selye. He was examining the effect of an ovarian hormone that he thought caused sickness in a sample of rats. Surprisingly, he noticed that almost any injected hormone produced this same sickness. He smartly realized that it was not the hormone under investigation that was causing these problems, but instead, the aversive experience of being handled and injected by researchers that led to high physiological arousal and, eventually, to health problems like ulcers. Selye (1946) coined the term stressor to label a stimulus that had this effect on the body and developed a model of the stress response called the **General Adaptation Syndrome**. Since then, psychologists have studied stress in a myriad of ways, including stress as negative events (e.g., natural disasters or major life changes like dropping out of school), as chronically difficult situations (e.g., taking care of a loved one with Alzheimer's), as short-term hassles, as a biological fight-or-flight response, and even as clinical illness like post-traumatic stress disorder (PTSD). It continues to be one of the most important and well-studied psychological correlates of illness, because excessive stress causes potentially damaging wear and tear on the body and can influence almost any imaginable disease process.

Protecting Our Health

An important question that health psychologists ask is: What keeps us protected from disease and alive longer? When considering this issue of **resilience** (Rutter, 1985), five factors are often studied in terms of their ability to protect (or sometimes harm) health. They are:

1. Coping

2. Control and Self-Efficacy

3. Social Relationships

4. Dispositions and Emotions

5. Stress Management

Coping Strategies

How individuals cope with the stressors they face can have a significant impact on health. Coping is often classified into two categories: problem-focused coping or emotion-focused coping (Carver, Scheier, & Weintraub, 1989). **Problem-focused coping** is thought of as actively addressing the event that is causing stress in an effort to solve the issue at hand. For example, say you have an important exam coming up next week. A problem-focused strategy might be to spend additional time over the weekend studying to make sure you understand all of the material. **Emotion-focused coping**, on the other hand, regulates the emotions that come with stress. In the above examination example, this might mean watching a funny movie to take your mind off the anxiety you are feeling. In the short term, emotion-focused coping might reduce feelings of stress, but problem-focused coping seems to have the greatest impact on mental wellness (Billings & Moos, 1981; Herman-Stabl, Stemmler, & Petersen, 1995). That being said, when events are uncontrollable (e.g., the death of a loved one), emotion-focused coping directed at managing your feelings, at first, might be the better strategy. Therefore, it is always important to consider the match of the stressor to the coping strategy when evaluating its plausible benefits.

Feeling a sense of control in one's life is important. Something as simple as having control over the care of a houseplant has been shown to improve health and longevity. [Image: JJ Harrison, https://goo.gl/82FsdV, CC BY-SA 2.5, https://goo.gl/SRAIwa]

Control and Self-Efficacy

Another factor tied to better health outcomes and an improved ability to cope with stress is having the belief that you have **control** over a situation. For example, in one study where participants were forced to listen to unpleasant (stressful) noise, those who were led to believe that they had control over the noise performed much better on proofreading tasks afterwards (Glass & Singer, 1972). In other words, even though participants *did not* have actual

control over the noise, the control *belief* aided them in completing the task. In similar studies, perceived control benefited immune system functioning (Sieber et al., 1992). Outside of the laboratory, studies have shown that older residents in assisted living facilities, which are notorious for low control, lived *longer* and showed *better* health outcomes when given control over something as simple as watering a plant or choosing when student volunteers came to visit (Rodin & Langer, 1977; Schulz & Hanusa, 1978). In addition, feeling in control of a threatening situation can actually change stress hormone levels (Dickerson & Kemeny, 2004). Believing that you have control over your own behaviors can also have a positive influence on important outcomes like smoking cessation, contraception use, and weight management (Wallston & Wallston, 1978). When individuals do not believe they have control, they do not try to change. **Self-efficacy** is closely related to control, in that people with high levels of this trait believe they can complete tasks and reach their goals. Just as feeling in control can reduce stress and improve health, higher self-efficacy can reduce stress and negative **health behaviors**, and is associated with better health (O'Leary, 1985).

Social Relationships

Research has shown that the impact of social isolation on our risk for disease and death is similar in magnitude to the risk associated with smoking regularly (Holt-Lunstad, Smith, & Layton, 2010; House, Landis, & Umberson, 1988). In fact, the importance of social relationships for our health is so significant that some scientists believe our body has developed a physiological system that encourages us to seek out our relationships, especially in times of stress (Taylor et al., 2000). **Social integration** is the concept used to describe the number of social roles that you have (Cohen & Wills, 1985), as well as the lack of isolation. For example, you might be a daughter, a basketball team member, a Humane Society volunteer, a coworker, and a student. Maintaining these different roles can improve your health via encouragement from those around you to maintain a healthy lifestyle. Those in your social network might also provide you with **social support** (e.g., when you are under stress). This support might include emotional help (e.g., a hug when you need it), tangible help (e.g., lending you money), or advice. By helping to improve health behaviors and reduce stress, social relationships can have a powerful, protective impact on health, and in some cases, might even help people with serious illnesses stay alive longer (Spiegel, Kraemer, Bloom, & Gottheil, 1989).

Dispositions and Emotions: What's Risky and What's Protective?

Negative dispositions and personality traits have been strongly tied to an array of health risks. One of the earliest negative trait-to-health connections was discovered in the 1950s by two cardiologists. They made the interesting discovery that there were common behavioral and

psychological patterns among their heart patients that were not present in other patient samples. This pattern included being competitive, impatient, hostile, and time urgent. They labeled it Type A Behavior. Importantly, it was found to be associated with *double* the risk of heart disease as compared with Type B Behavior (Friedman & Rosenman, 1959). Since the 1950s, researchers have discovered that it is the hostility and competitiveness components of Type A that are especially harmful to heart health (Iribarren et al., 2000; Matthews, Glass, Rosenman, & Bortner, 1977; Miller, Smith, Turner, Guijarro, & Hallet, 1996). Hostile individuals are quick to get upset, and this angry arousal can damage the arteries of the heart. In addition, given their negative personality style, hostile people often lack a heath-protective supportive social network.

Positive traits and states, on the other hand, are often health protective. For example, characteristics like positive emotions (e.g., feeling happy or excited) have been tied to a wide range of benefits such as increased longevity, a reduced likelihood of developing some illnesses, and better outcomes once you are diagnosed with certain diseases (e.g., heart disease, HIV) (Pressman & Cohen, 2005). Across the world, even in the most poor and
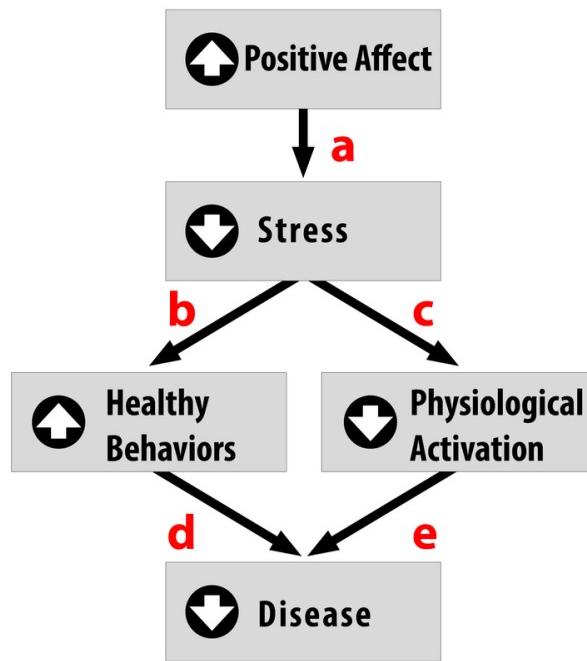
Figure 2. This figure illustrates one possible way that positive affect protects individuals against disease. Positive affect can reduce stress perceptions (a), thereby improving health behaviors (b) and lowering physiological stress responses (c) (e.g., decreased cardiovascular reactivity, lower stress hormones, non-suppressed immune activity). As a result, there is likely to be less incidence of disease (d, e). (Adapted from Pressman & Cohen, 2005)

underdeveloped nations, positive emotions are consistently tied to better health (Pressman, Gallagher, & Lopez, 2013). Positive emotions can also serve as the "antidote" to stress, protecting us against some of its damaging effects (Fredrickson, 2001; Pressman & Cohen, 2005; see Figure 2). Similarly, looking on the bright side can also improve health. Optimism has been shown to improve coping, reduce stress, and predict better disease outcomes like recovering from a heart attack more rapidly (Kubzansky, Sparrow, Vokonas, & Kawachi, 2001; Nes & Segerstrom, 2006; Scheier & Carver, 1985; Segerstrom, Taylor, Kemeny, & Fahey, 1998).

Stress Management

About 20 percent of Americans report having stress, with 18–33 year-olds reporting the highest levels (American Psychological Association, 2012). Given that the sources of our stress are often difficult to change (e.g., personal finances, current job), a number of interventions have been designed to help reduce the aversive responses to duress. For example, relaxation activities and forms of meditation are techniques that allow individuals to reduce their stress via breathing exercises, muscle relaxation, and mental imagery. Physiological arousal from stress can also be reduced via **biofeedback**, a technique where the individual is shown bodily information that is not normally available to them (e.g., heart rate), and then taught strategies to alter this signal. This type of intervention has even shown promise in reducing heart and hypertension risk, as well as other serious conditions (e.g., Moravec, 2008; Patel, Marmot, & Terry, 1981). But reducing stress does not have to be complicated! For example, exercise is a great stress reduction activity (Salmon, 2001) that has a myriad of health benefits.

The Importance Of Good Health Practices

As a student, you probably strive to maintain good grades, to have an active social life, and to stay healthy (e.g., by getting enough sleep), but there is a popular joke about what it's like to be in college: you can only pick two of these things (see Figure 3 for an example). The busy life of a college student doesn't always allow you to maintain all three areas of your life, especially during test-taking periods. In one study, researchers found that students taking exams were more stressed and, thus, smoked more, drank more caffeine, had less physical activity, and had worse sleep habits (Oaten & Chang, 2005), all of which could have detrimental effects on their health. Positive health practices are *especially* important in times of stress when your immune system is compromised due to high stress and the elevated frequency of exposure to the illnesses of your fellow students in lecture halls, cafeterias, and dorms.

Psychologists study both **health behaviors** and health habits. The former are behaviors that can improve or harm your health. Some examples include regular exercise, flossing, and
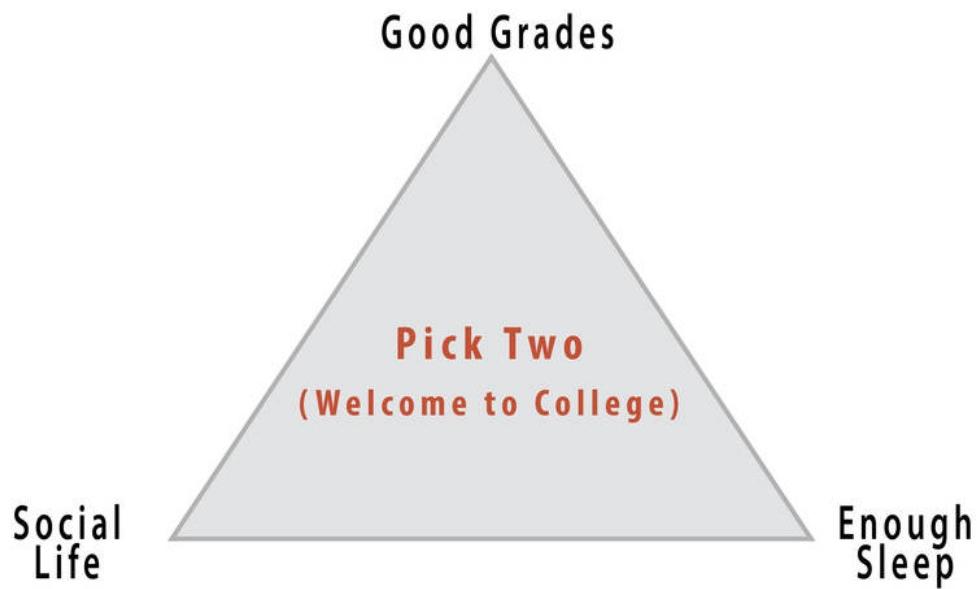
Figure 3: A popular joke about how difficult it is to stay balanced and healthy during college.

wearing sunscreen, versus negative behaviors like drunk driving, pulling all-nighters, or smoking. These behaviors become *habits* when they are firmly established and performed automatically. For example, do you have to think about putting your seatbelt on or do you do it automatically? Habits are often developed early in life thanks to parental encouragement or the influence of our peer group.

While these behaviors sound minor, studies have shown that those who engaged in more of these protective habits (e.g., getting 7–8 hours of sleep regularly, not smoking or drinking excessively, exercising) had fewer illnesses, felt better, and were less likely to die over a 9–12-year follow-up period (Belloc & Breslow 1972; Breslow & Enstrom 1980). For college students, health behaviors can even influence academic performance. For example, poor sleep quality and quantity are related to weaker learning capacity and academic performance (Curcio, Ferrara, & De Gennaro, 2006). Due to the effects that health behaviors can have, much effort is put forward by psychologists to understand *how* to change unhealthy behaviors, and to understand *why* individuals fail to act in healthy ways. Health promotion involves enabling individuals to improve health by focusing on behaviors that pose a risk for future illness, as well as spreading knowledge on existing risk factors. These might be genetic risks you are born with, or something you developed over time like obesity, which puts you at risk for Type 2 diabetes and heart disease, among other illnesses.

Psychology And Medicine

There are many psychological factors that influence medical treatment outcomes. For example, older individuals, (Meara, White, & Cutler, 2004), women (Briscoe, 1987), and those from higher socioeconomic backgrounds (Adamson, Ben-Shlomo, Chaturvedi, & Donovan, 2008) are all *more* likely to seek medical care. On the other hand, some individuals who need care might avoid it due to financial obstacles or preconceived notions about medical practitioners or the illness. Thanks to the growing amount of medical information online, many people now use the Internet for health information and 38% percent report that this influences their decision to see a doctor (Fox & Jones, 2009). Unfortunately, this is not always a good thing because individuals tend to do a poor job assessing the credibility of health information. For example, college-student participants reading online articles about HIV and syphilis rated a physician's article and a college student's article as *equally* credible if the participants said they were familiar with the health topic (Eastin, 2001). Credibility of health information often means how accurate or trustworthy the information is, and it can be influenced by irrelevant factors, such as the website's design, logos, or the organization's contact information (Freeman & Spyridakis, 2004). Similarly, many people post health questions on online, unmoderated forums where *anyone* can respond, which allows for the possibility of inaccurate information being provided for serious medical conditions by unqualified individuals.

While the Internet has increased the amount of medical information available to the public and created greater access, there are real concerns about how people are making decisions about their health based on that information. [Image: Mapbox, https://goo.gl/UNhmx5, CC BY 2.0, https://goo.gl/BRvSA7]

After individuals decide to seek care, there is also variability in the information they give their medical provider. Poor communication (e.g., due to embarrassment or feeling rushed) can influence the accuracy of the diagnosis and the effectiveness of the prescribed treatment. Similarly, there is variation following a visit to the doctor. While most individuals are tasked with a health recommendation (e.g., buying and using a medication appropriately, losing weight, going to another expert), not everyone *adheres* to medical recommendations (Dunbar-Jacob & Mortimer-Stephens, 2010). For example, many individuals take medications inappropriately (e.g., stopping early, not filling prescriptions) or fail to change their behaviors (e.g., quitting smoking). Unfortunately, getting patients to follow medical orders is not as easy as one would think. For example, in one study, over one third of diabetic patients failed to get proper medical care that would prevent or slow down diabetes-related blindness (Schoenfeld, Greene, Wu, & Leske, 2001)! Fortunately, as mobile technology improves, physicians now have the ability to monitor **adherence** and work to improve it (e.g., with pill bottles that monitor if they are opened at the right time). Even text messages are useful for improving treatment adherence and outcomes in depression, smoking cessation, and weight loss (Cole-Lewis, & Kershaw, 2010).

Being A Health Psychologist

Training as a clinical health psychologist provides a variety of possible career options. Clinical health psychologists often work on teams of physicians, social workers, allied health professionals, and religious leaders. These teams may be formed in locations like rehabilitation centers, hospitals, primary care offices, emergency care centers, or in chronic illness clinics. Work in each of these settings will pose unique challenges in patient care, but the primary responsibility will be the same. Clinical health psychologists will evaluate physical, personal, and environmental factors contributing to illness and preventing improved health. In doing so, they will then help create a treatment strategy that takes into account all dimensions of a person's life and health, which maximizes its potential for success. Those who specialize in health psychology can also conduct research to discover new health predictors and risk factors, or develop interventions to prevent and treat illness. Researchers studying health psychology work in numerous locations, such as universities, public health departments, hospitals, and private organizations. In the related field of **behavioral medicine**, careers focus on the application of this type of research. Occupations in this area might include jobs in occupational therapy, rehabilitation, or preventative medicine. Training as a health psychologist provides a wide skill set applicable in a number of different professional settings and career paths.

The Future Of Health Psychology

Much of the past medical research literature provides an incomplete picture of human health. "Health care" is often "illness care." That is, it focuses on the management of symptoms and illnesses as they arise. As a result, in many developed countries, we are faced with several health epidemics that are difficult and costly to treat. These include obesity, diabetes, and cardiovascular disease, to name a few. The National Institutes of Health have called for researchers to use the knowledge we have about risk factors to design effective interventions to reduce the prevalence of *preventable* illness. Additionally, there are a growing number of individuals across developed countries with *multiple* chronic illnesses and/or lasting disabilities, especially with older age. Addressing their needs and maintaining their quality of life will require skilled individuals who understand how to properly treat these populations. Health psychologists will be on the forefront of work in these areas.

With this focus on prevention, it is important that health psychologists move beyond studying risk (e.g., depression, stress, hostility, low socioeconomic status) in isolation, and move toward studying factors that confer resilience and protection from disease. There is, fortunately, a growing interest in studying the positive factors that protect our health (e.g., Diener & Chan, 2011; Pressman & Cohen, 2005; Richman, Kubzansky, Maselko, Kawachi, Choo, & Bauer, 2005) with evidence strongly indicating that people with higher positivity live longer, suffer fewer illnesses, and generally feel better. Seligman (2008) has even proposed a field of "Positive Health" to specifically study those who exhibit "above average" health—something we do not think about enough. By shifting some of the research focus to identifying and understanding these health-promoting factors, we may capitalize on this information to improve public health.

Innovative interventions to improve health are already in use and continue to be studied. With recent advances in technology, we are starting to see great strides made to improve health with the aid of computational tools. For example, there are hundreds of simple applications (apps) that use email and text messages to send reminders to take medication, as well as mobile apps that allow us to monitor our exercise levels and food intake (in the growing mobile-health, or m-health, field). These m-health applications can be used to raise health awareness, support treatment and compliance, and remotely collect data on a variety of outcomes. Also exciting are devices that allow us to monitor physiology in real time; for example, to better understand the stressful situations that raise blood pressure or heart rate. With advances like these, health psychologists will be able to serve the population better, learn more about health and health behavior, and develop excellent health-improving strategies that could be specifically targeted to certain populations or individuals. These leaps in equipment development, partnered with growing health psychology knowledge and exciting advances in neuroscience and genetic research, will lead health researchers and practitioners into an exciting new time where, hopefully, we will understand more and more

about how to keep people healthy.

Outside Resources

App: 30 iPhone apps to monitor your health
http://www.hongkiat.com/blog/iphone-health-app/

Quiz: Hostility
http://www.mhhe.com/socscience/hhp/fahey7e/wellness_worksheets/wellness_worksheet_090.html

Self-assessment: Perceived Stress Scale
http://www.ncsu.edu/assessment/resources/perceived_stress_scale.pdf

Video: Try out a guided meditation exercise to reduce your stress
https://www.youtube.com/watch?v=dEzbdLn2bJc

Web: American Psychosomatic Society
http://www.psychosomatic.org/home/index.cfm

Web: APA Division 38, Health Psychology
http://www.health-psych.org

Web: Society of Behavioral Medicine
http://www.sbm.org

Discussion Questions

1. What psychological factors contribute to health?

2. Which psychosocial constructs and behaviors might help protect us from the damaging effects of stress?

3. What kinds of interventions might help to improve resilience? Who will these interventions help the most?

4. How should doctors use research in health psychology when meeting with patients?

5. Why do clinical health psychologists play a critical role in improving public health?

Vocabulary

Adherence
In health, it is the ability of a patient to maintain a health behavior prescribed by a physician. This might include taking medication as prescribed, exercising more, or eating less high-fat food.

Behavioral medicine
A field similar to health psychology that integrates psychological factors (e.g., emotion, behavior, cognition, and social factors) in the treatment of disease. This applied field includes clinical areas of study, such as occupational therapy, hypnosis, rehabilitation or medicine, and preventative medicine.

Biofeedback
The process by which physiological signals, not normally available to human perception, are transformed into easy-to-understand graphs or numbers. Individuals can then use this information to try to change bodily functioning (e.g., lower blood pressure, reduce muscle tension).

Biomedical Model of Health
A reductionist model that posits that ill health is a result of a deviation from normal function, which is explained by the presence of pathogens, injury, or genetic abnormality.

Biopsychosocial Model of Health
An approach to studying health and human function that posits the importance of biological, psychological, and social (or environmental) processes.

Chronic disease
A health condition that persists over time, typically for periods longer than three months (e.g., HIV, asthma, diabetes).

Control
Feeling like you have the power to change your environment or behavior if you need or want to.

Daily hassles
Irritations in daily life that are not necessarily traumatic, but that cause difficulties and repeated stress.

Emotion-focused coping
Coping strategy aimed at reducing the negative emotions associated with a stressful event.

General Adaptation Syndrome
A three-phase model of stress, which includes a mobilization of physiological resources phase, a coping phase, and an exhaustion phase (i.e., when an organism fails to cope with the stress adequately and depletes its resources).

Health
According to the World Health Organization, it is a complete state of physical, mental, and social well-being and not merely the absence of disease or infirmity.

Health behavior
Any behavior that is related to health—either good or bad.

Hostility
An experience or trait with cognitive, behavioral, and emotional components. It often includes cynical thoughts, feelings of emotion, and aggressive behavior.

Mind–body connection
The idea that our emotions and thoughts can affect how our body functions.

Problem-focused coping
A set of coping strategies aimed at improving or changing stressful situations.

Psychoneuroimmunology
A field of study examining the relationship among psychology, brain function, and immune function.

Psychosomatic medicine
An interdisciplinary field of study that focuses on how biological, psychological, and social processes contribute to physiological changes in the body and health over time.

Resilience
The ability to "bounce back" from negative situations (e.g., illness, stress) to normal functioning or to simply not show poor outcomes in the face of adversity. In some cases, resilience may lead to better functioning following the negative experience (e.g., post-traumatic growth).

Self-efficacy

The belief that one can perform adequately in a specific situation.

Social integration
The size of your social network, or number of social roles (e.g., son, sister, student, employee, team member).

Social support
The perception or actuality that we have a social network that can help us in times of need and provide us with a variety of useful resources (e.g., advice, love, money).

Stress
A pattern of physical and psychological responses in an organism after it perceives a threatening event that disturbs its homeostasis and taxes its abilities to cope with the event.

Stressor
An event or stimulus that induces feelings of stress.

Type A Behavior
Type A behavior is characterized by impatience, competitiveness, neuroticism, hostility, and anger.

Type B Behavior
Type B behavior reflects the absence of Type A characteristics and is represented by less competitive, aggressive, and hostile behavior patterns.

References

Adamson, J., Ben-Shlomo, Y., Chaturvedi, N., & Donovan, J. (2008). Ethnicity, socio-economic position and gender—do they affect reported health—care seeking behaviour? *Social Science & Medicine, 57*, 895–904.

American Psychological Association (2012). Stress in American 2012 [Press release]. Retrieved from http://www.apa.org/news/press/releases/stress/2012/generations.aspx

Belloc, N. B., & Breslow, L. (1972). Relationship of physical health status and health practices. *Preventive Medicine, 1*, 409–421.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine, 4*, 139–157.

Breslow, L., & Enstrom, J. E. (1980). Persistence of health habits and their relationship to mortality. *Preventive Medicine, 9*, 469–483.

Briscoe, M. E. (1987). Why do people go to the doctor? Sex differences in the correlates of GP consultation. *Social Science & Medicine, 25*, 507–513.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267–283.

Cohen, S., & Herbert, T. B. (1996). Health psychology: Psychological factors and physical disease from the perspective of human psychoneuroimmunology. *Annual Review of Psychology, 47*, 113–142.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310–357.

Cohen, S., Alper, C. M., Doyle, W. J., Treanor, J. J., & Turner, R. B. (2006). Positive emotional style predicts resistance to illness after experimental exposure to rhinovirus or influenza A virus. *Psychosomatic Medicine, 68*, 809–815.

Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *Journal of the American Medical Association, 298*, 1685–1687.

Cohen, S., Tyrrell, D. A., & Smith, A. P. (1991). Psychological stress and susceptibility to the common cold. *New England Journal of Medicine, 325*, 606–612.

Cole-Lewis, H., & Kershaw, T. (2010). Text messaging as a tool for behavior change in disease prevention and management. *Epidemiologic Reviews, 32*, 56–69.

Curcio, G., Ferrara, M., & De Gennaro, L. (2006). Sleep loss, learning capacity and academic performance. *Sleep Medicine Reviews, 10*, 323–337.

DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and

mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology, 54*, 486–495.

Dickerson, S. S., & Kemeny, M. E. (2004). Acute stressors and cortisol responses: a theoretical integration and synthesis of laboratory research. *Psychological Bulletin, 130*, 355–391.

Dunbar-Jacob, J., & Mortimer-Stephens, M. (2001). Treatment adherence in chronic disease. *Journal of Clinical Epidemiology, 54*(12), S57–S60

Eastin, M. S. (2001). Credibility assessments of online health information: The effects of source expertise and knowledge of content. *Journal of Computer Mediated Communication, 6*.

Fox, S. & Jones, S. (2009). The social life of health information. *Pew Internet and American Life Project, California HealthCare Foundation*. Retrieved from http://www.pewinternet.org/Reports/2009/8-The-Social-Life-of-Health-Information.aspx

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist, 56*, 218–226.

Freeman, K. S., & Spyridakis, J. H. (2004). An examination of factors that affect the credibility of online health information. *Technical Communication, 51*, 239–263.

Friedman, M., & Rosenman, R. (1959). Association of specific overt behaviour pattern with blood and cardiovascular findings. *Journal of the American Medical Association, 169*, 1286–1296.

Glass, D. C., & Singer, J. E. (1972). Behavioral aftereffects of unpredictable and uncontrollable aversive events: Although subjects were able to adapt to loud noise and other stressors in laboratory experiments, they clearly demonstrated adverse aftereffects. *American Scientist, 60*, 457–465.

Herman-Stabl, M. A., Stemmler, M., & Petersen, A. C. (1995). Approach and avoidant coping: Implications for adolescent mental health. *Journal of Youth and Adolescence, 24*, 649–665.

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS Medicine, 7*(7), e1000316.

House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science, 241*, 540–545.

Iribarren, C., Sidney, S., Bild, D. E., Liu, K., Markovitz, J. H., Roseman, J. M., & Matthews, K. (2000). Association of hostility with coronary artery calcification in young adults. *Journal of the American Medical Association, 283*, 2546–2551.

Kubzansky, L. D., Sparrow, D., Vokonas, P., & Kawachi, I. (2001). Is the glass half empty or half full? A prospective study of optimism and coronary heart disease in the normative aging study. *Psychosomatic Medicine, 63*, 910–916.

Matthews, K. A., Glass, D. C., Rosenman, R. H., & Bortner, R. W. (1977). Competitive drive, pattern A, and coronary heart disease: A further analysis of some data from the Western Collaborative Group Study. *Journal of Chronic Diseases, 30*, 489–498.

Meara, E., White, C., & Cutler, D. M. (2004). Trends in medical spending by age, 1963–2000. *Health Affairs, 23*, 176–183.

Miller, T. Q., Smith, T. W., Turner, C. W., Guijarro, M. L., & Hallet, A. J. (1996). Meta-analytic review of research on hostility and physical health. *Psychological Bulletin, 119*, 322–348.

Moravec, C. S. (2008). Biofeedback therapy in cardiovascular disease: rationale and research overview. *Cleveland Clinic Journal of Medicine, 75*, S35–S38.

Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and Social Psychology Review, 10*, 235–251.

Oaten, M., & Cheng, K. (2005). Academic examination stress impairs self–control. *Journal of Social and Clinical Psychology, 24*, 254–279.

O'Leary, A. (1985). Self-efficacy and health. *Behaviour Research and Therapy, 23*, 437–451.

Patel, C., Marmot, M. G., & Terry, D. J. (1981). Controlled trial of biofeedback-aided behavioural methods in reducing mild hypertension. *British Medical Journal (Clinical research ed.), 282*, 2005–2008.

Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin, 131*, 925–971.

Pressman, S. D., Gallagher, M. W., & Lopez, S. J. (2013). Is the emotion-health connection a "first-world problem"? *Psychological Science, 24*, 544–549.

Richman, L. S., Kubzansky, L., Maselko, J., Kawachi, I., Choo, P., & Bauer, M. (2005). Positive emotion and health: Going beyond the negative. *Health Psychology, 24*, 422–429.

Rodin, J., & Langer, E. J. (1977). Long-term effects of a control-relevant intervention with the institutionalized aged. *Journal of Personality and Social Psychology, 35*, 897–902.

Rutter, M. (1985). Resilience in the face of adversity. *British Journal of Psychiatry, 147*, 598–611.

Salmon, P. (2001). Effects of physical exercise on anxiety, depression, and sensitivity to stress: A unifying theory. *Clinical Psychology Review, 21*(1), 33–61.

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219–247.

Schoenfeld, E. R., Greene, J. M., Wu, S. Y., & Leske, M. C. (2001). Patterns of adherence to diabetes vision care guidelines: Baseline findings from the Diabetic Retinopathy Awareness Program. *Ophthalmology, 108*, 563–571.

Schulz, R., & Hanusa, B.H. (1978). Long-term effects of control and predictability-enhancing interventions: Findings and ethical issues. *Journal of Personality and Social Psychology, 36*, 1194–1202.

Segerstrom, S. C., Taylor, S. E., Kemeny, M. E., & Fahey, J. L. (1998). Optimism is associated with mood, coping, and immune change in response to stress. *Journal of Personality and Social Psychology, 74*, 1646–1655.

Seligman, M. E. P. (2008). Positive health. *Applied Psychology, 57*, 3–18.

Selye, H. (1946). The general adaptation syndrome and the diseases of adaptation. *Journal of Clinical Endocrinology, 6*, 117–230.

Sieber, W. J., Rodin, J., Larson, L., Ortega, S., Cummings, N., Levy, S., ... Herberman, R. (1992). Modulation of human natural killer cell activity by exposure to uncontrollable stress. *Brain, Behavior, and Immunity, 6*, 141–156.

Spiegel, D., Kraemer, H., Bloom, J., & Gottheil, E. (1989). Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *The Lancet, 334*, 888–891.

Taylor, S. E. (2012) *Health psychology* (8th ed.). New York, NY: McGraw-Hill.

Taylor, S. E., Klein, L. C., Lewis, B. P., Gruenewald, T. L., Gurung, R. A., & Updegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review, 107*, 411–429.

Twisk, J. W., Snel, J., Kemper, H. C., & van Mechelen, W. (1999). Changes in daily hassles and life events and the relationship with coronary heart disease risk factors: A 2-year longitudinal study in 27–29-year-old males and females. *Journal of Psychosomatic Research, 46*, 229–240.

Wallston, B. S., & Wallston, K. A. (1978). Locus of control and health: a review of the literature. *Health Education & Behavior, 6*, 107–117.

World Health Organization (2013). *Cardiovascular diseases*. Retrieved from http://www.who.int/mediacentre/factsheets/fs317/en/index.html

World Health Organization. (1946). *Preamble to the Constitution of the World Health Organization*. Retrieved from http://www.who.int/about/definition/en/print.html

Mental illness

15
Mood Disorders

Anda Gershon & Renee Thompson

Everyone feels down or euphoric from time to time, but this is different from having a mood disorder such as major depressive disorder or bipolar disorder. Mood disorders are extended periods of depressed, euphoric, or irritable moods that in combination with other symptoms cause the person significant distress and interfere with his or her daily life, often resulting in social and occupational difficulties. In this module, we describe major mood disorders, including their symptom presentations, general prevalence rates, and how and why the rates of these disorders tend to vary by age, gender, and race. In addition, biological and environmental risk factors that have been implicated in the development and course of mood disorders, such as heritability and stressful life events, are reviewed. Finally, we provide an overview of treatments for mood disorders, covering treatments with demonstrated effectiveness, as well as new treatment options showing promise.

Learning Objectives

- Describe the diagnostic criteria for mood disorders.
- Understand age, gender, and ethnic differences in prevalence rates of mood disorders.
- Identify common risk factors for mood disorders.
- Know effective treatments of mood disorders.

The actress Brooke Shields published a memoir titled Down Came the Rain: My Journey through Postpartum Depression in which she described her struggles with depression following the birth of her daughter. Despite the fact that about one in 20 women experience

Perinatal depression following child birth afflicts about 5% of all mothers. An unfortunate social stigma regarding this form of depression compounds the problem for the women who suffer its effects. [Image: CC0 Public Domain]

depression after the birth of a baby (American Psychiatric Association [APA], 2013), postpartum depression—recently renamed "perinatal depression"—continues to be veiled by stigma, owing in part to a widely held expectation that motherhood should be a time of great joy. In an opinion piece in the *New York Times*, Shields revealed that entering motherhood was a profoundly overwhelming experience for her. She vividly describes experiencing a sense of "doom" and "dread" in response to her newborn baby. Because motherhood is conventionally thought of as a joyous event and not associated with sadness and hopelessness, responding to a newborn baby in this way can be shocking to the new mother as well as those close to her. It may also involve a great deal of shame for the mother, making her reluctant to divulge her experience to others, including her doctors and family.

Feelings of shame are not unique to perinatal depression. Stigma applies to other types of depressive and bipolar disorders and contributes to people not always receiving the necessary support and treatment for these disorders. In fact, the World Health Organization ranks both major depressive disorder (MDD) and bipolar disorder (BD) among the top 10 leading causes of disability worldwide. Further, MDD and BD carry a high risk of suicide. It is estimated that 25%–50% of people diagnosed with BD will attempt suicide at least once in their lifetimes (Goodwin & Jamison, 2007).

What Are Mood Disorders?

Mood Episodes

Everyone experiences brief periods of sadness, irritability, or euphoria. This is different than having a mood disorder, such as MDD or BD, which are characterized by a constellation of symptoms that causes people significant distress or impairs their everyday functioning.

Major Depressive Episode

A major depressive episode (MDE) refers to symptoms that co-occur for at least two weeks and cause significant distress or impairment in functioning, such as interfering with work, school, or relationships. Core symptoms include feeling down or depressed or experiencing **anhedonia**—loss of interest or pleasure in things that one typically enjoys. According to the fifth edition of the *Diagnostic and Statistical Manual* (*DSM-5;* APA, 2013), the criteria for an MDE require five or more of the following nine symptoms, including one or both of the first two symptoms, for most of the day, nearly every day:

1. depressed mood
2. diminished interest or pleasure in almost all activities
3. significant weight loss or gain or an increase or decrease in appetite
4. insomnia or **hypersomnia**
5. **psychomotor agitation** or **retardation**
6. fatigue or loss of energy
7. feeling worthless or excessive or inappropriate guilt
8. diminished ability to concentrate or indecisiveness
9. recurrent thoughts of death, **suicidal ideation**, or a suicide attempt

These symptoms cannot be caused by physiological effects of a substance or a general medical condition (e.g., hypothyroidism).

Manic or Hypomanic Episode

The core criterion for a manic or hypomanic episode is a distinct period of abnormally and persistently euphoric, expansive, or irritable mood and persistently increased goal-directed activity or energy. The mood disturbance must be present for one week or longer in mania (unless hospitalization is required) or four days or longer in hypomania. Concurrently, at least three of the following symptoms must be present in the context of euphoric mood (or at least four in the context of irritable mood):

1. inflated self-esteem or **grandiosity**
2. increased goal-directed activity or psychomotor agitation

3. reduced need for sleep

4. racing thoughts or flight of ideas

5. distractibility

6. increased talkativeness

7. excessive involvement in risky behaviors

Manic episodes are distinguished from hypomanic episodes by their duration and associated impairment; whereas manic episodes must last one week and are defined by a significant impairment in functioning, hypomanic episodes are shorter and not necessarily accompanied by impairment in functioning.

Mood Disorders

Unipolar Mood Disorders

Two major types of unipolar disorders described by the *DSM-5* (APA, 2013) are major depressive disorder and persistent depressive disorder (PDD; dysthymia). MDD is defined by one or more MDEs, but no history of manic or hypomanic episodes. Criteria for PDD are feeling depressed most of the day for more days than not, for at least two years. At least two of the following symptoms are also required to meet criteria for PDD:

1. poor appetite or overeating

2. insomnia or hypersomnia

3. low energy or fatigue

4. low self-esteem

5. poor concentration or difficulty making decisions

6. feelings of hopelessness

Like MDD, these symptoms need to cause significant distress or impairment and cannot be due to the effects of a substance or a general medical condition. To meet criteria for PDD, a person cannot be without symptoms for more than two months at a time. PDD has overlapping symptoms with MDD. If someone meets criteria for an MDE during a PDD episode, the person will receive diagnoses of PDD and MDD.

Bipolar Mood Disorders

Three major types of BDs are described by the *DSM-5* (APA, 2013). Bipolar I Disorder (BD I), which was previously known as manic-depression, is characterized by a single (or recurrent) manic episode. A depressive episode is not necessary but commonly present for the diagnosis of BD I. Bipolar II Disorder is characterized by single (or recurrent) hypomanic episodes and depressive episodes. Another type of BD is cyclothymic disorder, characterized by numerous and alternating periods of hypomania and depression, lasting at least two years. To qualify for cyclothymic disorder, the periods of depression cannot meet full diagnostic criteria for an MDE; the person must experience symptoms at least half the time with no more than two consecutive symptom-free

Bipolar disorders are characterized by cycles of high energy and depression. [Image: Brett Whaley, https://goo.gl/k4HTR7, CC BY-NC 2.0, https://goo.gl/VnKlK8]

months; and the symptoms must cause significant distress or impairment.

It is important to note that the *DSM-5* was published in 2013, and findings based on the updated manual will be forthcoming. Consequently, the research presented below was largely based on a similar, but not identical, conceptualization of mood disorders drawn from the *DSM-IV* (APA, 2000).

How Common Are Mood Disorders? Who Develops Mood Disorders?

Depressive Disorders

In a nationally representative sample, lifetime prevalence rate for MDD is 16.6% (Kessler, Berglund, Demler, Jin, Merikangas, & Walters, 2005). This means that nearly one in five Americans will meet the criteria for MDD during their lifetime. The 12-month prevalence—the proportion of people who meet criteria for a disorder during a 12-month period—for PDD is approximately 0.5% (APA, 2013).

Although the onset of MDD can occur at any time throughout the lifespan, the average age of onset is mid-20s, with the age of onset decreasing with people born more recently (APA, 2000). Prevalence of MDD among older adults is much lower than it is for younger cohorts (Kessler, Birnbaum, Bromet, Hwang, Sampson, & Shahly, 2010). The duration of MDEs varies widely. Recovery begins within three months for 40% of people with MDD and within 12 months for 80% (APA, 2013). MDD tends to be a recurrent disorder with about 40%–50% of those who experience one MDE experiencing a second MDE (Monroe & Harkness, 2011). An earlier age of onset predicts a worse course. About 5%–10% of people who experience an MDE will later experience a manic episode (APA, 2000), thus no longer meeting criteria for MDD but instead meeting them for BD I. Diagnoses of other disorders across the lifetime are common for people with MDD: 59% experience an anxiety disorder; 32% experience an impulse control disorder, and 24% experience a substance use disorder (Kessler, Merikangas, & Wang, 2007).

> **Box 1. Specifiers**
>
> Both MDEs and manic episodes can be further described using standardized tags based on the timing of, or other symptoms that are occurring during, the mood episode, to increase diagnostic specificity and inform treatment. Psychotic features is specified when the episodes are accompanied by delusions (rigidly held beliefs that are false) or hallucinations (perceptual disturbances that are not based in reality). Seasonal pattern is specified when a mood episode occurs at the same time of the year for two consecutive years—most commonly occurring in the fall and winter. Peripartum onset is specified when a mood episode has an onset during pregnancy or within four weeks of the birth of a child. Approximately 3%–6% of women who have a child experience an MDE with peripartum onset (APA, 2013). This is less frequent and different from the baby blues or when women feel transient mood symptoms usually within 10 days of giving birth, which are experienced by most women (Nolen-Hoeksema & Hilt, 2009).

Women experience two to three times higher rates of MDD than do men (Nolen-Hoeksema & Hilt, 2009). This gender difference emerges during puberty (Conley & Rudolph, 2009). Before puberty, boys exhibit similar or higher prevalence rates of MDD than do girls (Twenge & Nolen-Hoeksema, 2002). MDD is inversely correlated with socioeconomic status (SES), a person's economic and social position based on income, education, and occupation. Higher prevalence rates of MDD are associated with lower SES (Lorant, Deliege, Eaton, Robert, Philippot, & Ansseau, 2003), particularly for adults over 65 years old (Kessler et al., 2010). Independent of SES, results from a nationally representative sample found that European Americans had a higher prevalence rate of MDD than did African Americans and Hispanic Americans, whose rates were similar (Breslau, Aguilar-Gaxiola, Kendler, Su, Williams, & Kessler, 2006). The course of MDD for African Americans is often more severe and less often treated than it is for European Americans, however (Williams et al., 2007). Native Americans have a higher prevalence rate than do European Americans, African Americans, or Hispanic Americans (Hasin, Goodwin, Stinson & Grant, 2005). Depression is not limited to industrialized or western cultures; it is

found in all countries that have been examined, although the symptom presentation as well as prevalence rates vary across cultures (Chentsova-Dutton & Tsai, 2009).

Bipolar Disorders

Adolescents experience a higher incidence of bipolar spectrum disorders than do adults. Making matters worse, those who are diagnosed with BD at a younger age seem to suffer symptoms more intensely than those with adult onset. [Image: CC0 Public Domain]

The lifetime prevalence rate of bipolar spectrum disorders in the general U.S. population is estimated at approximately 4.4%, with BD I constituting about 1% of this rate (Merikangas et al., 2007). Prevalence estimates, however, are highly dependent on the diagnostic procedures used (e.g., interviews vs. self-report) and whether or not sub-threshold forms of the disorder are included in the estimate. BD often co-occurs with other psychiatric disorders. Approximately 65% of people with BD meet diagnostic criteria for at least one additional psychiatric disorder, most commonly anxiety disorders and substance use disorders (McElroy et al., 2001). The co-occurrence of BD with other psychiatric disorders is associated with poorer illness course, including higher rates of suicidality (Leverich et al., 2003). A recent cross-national study sample of more than 60,000 adults from 11 countries, estimated the worldwide prevalence of BD at 2.4%, with BD I constituting 0.6% of this rate (Merikangas et al., 2011). In this study, the prevalence of BD varied somewhat by country. Whereas the United States had the highest lifetime prevalence (4.4%), India had the lowest (0.1%). Variation in prevalence rates was not necessarily related to SES, as in the case of Japan, a high-income country with a very low prevalence rate of BD (0.7%).

With regard to ethnicity, data from studies not confounded by SES or inaccuracies in diagnosis are limited, but available reports suggest rates of BD among European Americans are similar to those found among African Americans (Blazer et al., 1985) and Hispanic Americans (Breslau, Kendler, Su, Gaxiola-Aguilar, & Kessler, 2005). Another large community-based study found that although prevalence rates of mood disorders were similar across ethnic groups, Hispanic Americans and African Americans with a mood disorder were more likely to remain

persistently ill than European Americans (Breslau et al., 2005). Compared with European Americans with BD, African Americans tend to be underdiagnosed for BD (and over-diagnosed for schizophrenia) (Kilbourne, Haas, Mulsant, Bauer, & Pincus, 2004; Minsky, Vega, Miskimen, Gara, & Escobar, 2003), and Hispanic Americans with BD have been shown to receive fewer psychiatric medication prescriptions and specialty treatment visits (Gonzalez et al., 2007). Misdiagnosis of BD can result in the underutilization of treatment or the utilization of inappropriate treatment, and thus profoundly impact the course of illness.

As with MDD, adolescence is known to be a significant risk period for BD; mood symptoms start by adolescence in roughly half of BD cases (Leverich et al., 2007; Perlis et al., 2004*).* Longitudinal studies show that those diagnosed with BD prior to adulthood experience a more pernicious course of illness relative to those with adult onset, including more episode recurrence, higher rates of suicidality, and profound social, occupational, and economic repercussions (e.g., Lewinsohn, Seeley, Buckley, & Klein, 2002). The prevalence of BD is substantially lower in older adults compared with younger adults (1% vs. 4%) (Merikangas et al., 2007).

What Are Some of the Factors Implicated in the Development and Course of Mood Disorders?

Mood disorders are complex disorders resulting from multiple factors. Causal explanations can be attempted at various levels, including biological and psychosocial levels. Below are several of the key factors that contribute to onset and course of mood disorders are highlighted.

Depressive Disorders

Research across family and twin studies has provided support that genetic factors are implicated in the development of MDD. Twin studies suggest that familial influence on MDD is mostly due to genetic effects and that individual-specific environmental effects (e.g., romantic relationships) play
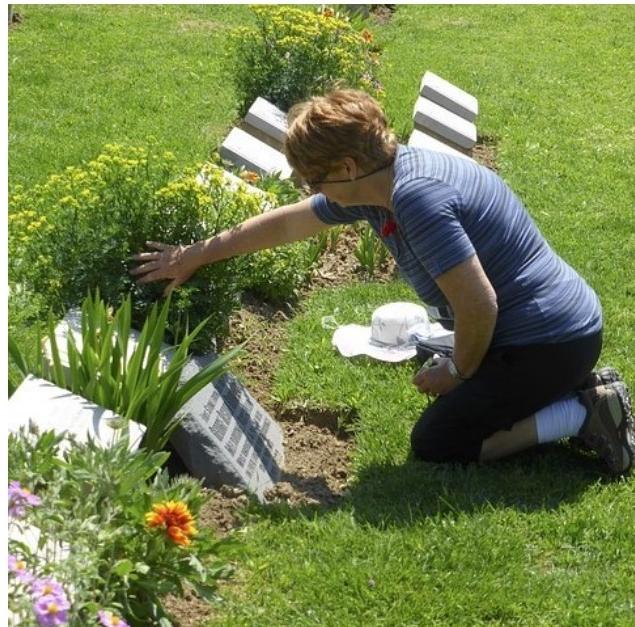
Romantic relationships can affect mood as in the case of divorce or the death of a spouse. [Image: CC0 Public Domain]

an important role, too. By contrast, the contribution of shared environmental effect by siblings is negligible (Sullivan, Neale & Kendler, 2000). The mode of inheritance is not fully understood although no single genetic variation has been found to increase the risk of MDD significantly. Instead, several genetic variants and environmental factors most likely contribute to the risk for MDD (Lohoff, 2010).

One environmental stressor that has received much support in relation to MDD is stressful life events. In particular, severe stressful life events—those that have long-term consequences and involve loss of a significant relationship (e.g., divorce) or economic stability (e.g., unemployment) are strongly related to depression (Brown & Harris, 1989; Monroe et al., 2009). Stressful life events are more likely to predict the first MDE than subsequent episodes (Lewinsohn, Allen, Seeley, & Gotlib, 1999). In contrast, minor events may play a larger role in subsequent episodes than the initial episodes (Monroe & Harkness, 2005).

Depression research has not been limited to examining reactivity to stressful life events. Much research, particularly brain imagining research using functional magnetic resonance imaging (fMRI), has centered on examining neural circuitry—the interconnections that allow multiple brain regions to perceive, generate, and encode information in concert. A meta-analysis of neuroimaging studies showed that when viewing negative stimuli (e.g., picture of an angry face, picture of a car accident), compared with healthy control participants, participants with MDD have greater activation in brain regions involved in stress response and reduced activation of brain regions involved in positively motivated behaviors (Hamilton, Etkin, Furman, Lemus, Johnson, & Gotlib, 2012).

Other environmental factors related to increased risk for MDD include experiencing **early adversity** (e.g., childhood abuse or neglect; Widom, DuMont, & Czaja, 2007), **chronic stress** (e.g., poverty) and interpersonal factors. For example, marital dissatisfaction predicts increases in depressive symptoms in both men and women. On the other hand, depressive symptoms also predict increases in marital dissatisfaction (Whisman & Uebelacker, 2009). Research has found that people with MDD generate some of their interpersonal stress (Hammen, 2005). People with MDD whose relatives or spouses can be described as critical and emotionally overinvolved have higher relapse rates than do those living with people who are less critical and emotionally overinvolved (Butzlaff & Hooley, 1998).

People's **attributional styles** or their general ways of thinking, interpreting, and recalling information have also been examined in the etiology of MDD (Gotlib & Joormann, 2010). People with a pessimistic attributional style tend to make internal (versus external), global (versus specific), and stable (versus unstable) attributions to negative events, serving as a vulnerability to developing MDD. For example, someone who when he fails an exam thinks

that it was his fault (internal), that he is stupid (global), and that he will always do poorly (stable) has a pessimistic attribution style. Several influential theories of depression incorporate attributional styles (Abramson, Metalsky, & Alloy, 1989; Abramson Seligman, & Teasdale, 1978).

Bipolar Disorders

Although there have been important advances in research on the etiology, course, and treatment of BD, there remains a need to understand the mechanisms that contribute to episode onset and relapse. There is compelling evidence for biological causes of BD, which is known to be highly heritable (McGuffin, Rijsdijk, Andrew, Sham, Katz, & Cardno, 2003). It may be argued that a high rate of heritability demonstrates that BD is fundamentally a biological phenomenon. However, there is much variability in the course of BD both within a person across time and across people (Johnson, 2005). The triggers that determine how and when this genetic vulnerability is expressed are not yet understood; however, there is evidence to suggest that psychosocial triggers may play an important role in BD risk (e.g., Johnson et al., 2008; Malkoff-Schwartz et al., 1998).

In addition to the genetic contribution, biological explanations of BD have also focused on brain function. Many of the studies using fMRI techniques to characterize BD have focused on the processing of emotional stimuli based on the idea that BD is fundamentally a disorder of emotion (APA, 2000). Findings show that regions of the brain thought to be involved in emotional processing and regulation are activated differently in people with BD relative to healthy controls (e.g., Altshuler et al., 2008; Hassel et al., 2008; Lennox, Jacob, Calder, Lupson, & Bullmore, 2004).

However, there is little consensus as to whether a particular brain region becomes more or less active in response to an emotional stimulus among people with BD compared with healthy controls. Mixed findings are in part due to samples consisting of participants who are at various phases of illness at the time of testing (manic, depressed, inter-episode). Sample sizes tend to be relatively small, making comparisons between subgroups difficult. Additionally, the use of a standardized stimulus (e.g., facial expression of anger) may not elicit a sufficiently strong response. Personally engaging stimuli, such as recalling a memory, may be more effective in inducing strong emotions (Isacowitz, Gershon, Allard, & Johnson, 2013).

Within the psychosocial level, research has focused on the environmental contributors to BD. A series of studies show that environmental stressors, particularly severe stressors (e.g., loss of a significant relationship), can adversely impact the course of BD. People with BD have substantially increased risk of relapse (Ellicott, Hammen, Gitlin, Brown, & Jamison, 1990) and

suffer more depressive symptoms (Johnson, Winett, Meyer, Greenhouse, & Miller, 1999) following a severe life stressor. Interestingly, positive life events can also adversely impact the course of BD. People with BD suffer more manic symptoms after life events involving attainment of a desired goal (Johnson et al., 2008). Such findings suggest that people with BD may have a hypersensitivity to rewards.

Evidence from the life stress literature has also suggested that people with mood disorders may have a circadian vulnerability that renders them sensitive to stressors that disrupt their sleep or rhythms. According to social zeitgeber theory (Ehlers, Frank, & Kupfer, 1988; Frank et al., 1994), stressors that disrupt sleep, or that disrupt the daily routines that entrain the biological clock (e.g., meal times) can trigger episode relapse. Consistent with this theory, studies have shown that life events that involve a disruption in sleep and daily routines, such as overnight travel, can increase bipolar symptoms in people with BD (Malkoff-Schwartz et al., 1998).

What Are Some of the Well-Supported Treatments for Mood Disorders?

Depressive Disorders

A number of medications are effective in treating mood disorders. Meditation, exercise, counseling and other therapies also show effectiveness for some disorders. [Image: CC0 Public Domain]

There are many treatment options available for people with MDD. First, a number of antidepressant medications are available, all of which target one or more of the neurotransmitters implicated in depression. The earliest antidepressant medications were monoamine oxidase inhibitors (MAOIs). MAOIs inhibit monoamine oxidase, an enzyme involved in deactivating dopamine, norepinephrine, and serotonin. Although effective in treating depression, MAOIs can have serious side effects. Patients taking MAOIs may develop dangerously high blood pressure if they take certain drugs (e.g., antihistamines) or eat foods containing tyramine, an amino acid commonly found in foods such as aged cheeses, wine, and soy sauce. Tricyclics, the second-oldest class of

antidepressant medications, block the reabsorption of norepinephrine, serotonin, or dopamine at synapses, resulting in their increased availability. Tricyclics are most effective for treating vegetative and somatic symptoms of depression. Like MAOIs, they have serious side effects, the most concerning of which is being cardiotoxic. Selective serotonin reuptake inhibitors (SSRIs; e.g., Fluoxetine) and serotonin and norepinephrine reuptake inhibitors (SNRIs; e.g., Duloxetine) are the most recently introduced antidepressant medications. SSRIs, the most commonly prescribed antidepressant medication, block the reabsorption of serotonin, whereas SNRIs block the reabsorption of serotonin and norepinephrine. SSRIs and SNRIs have fewer serious side effects than do MAOIs and tricyclics. In particular, they are less cardiotoxic, less lethal in overdose, and produce fewer cognitive impairments. They are not, however, without their own side effects, which include but are not limited to difficulty having orgasms, gastrointestinal issues, and insomnia. It should be noted that anti-depressant medication may not work equally for all people. This approach to treatment often involves experimentation with several medications and dosages, and may be more effective when paired with physical exercise and psychotherapy.

Other biological treatments for people with depression include electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), and deep brain stimulation. ECT involves inducing a seizure after a patient takes muscle relaxants and is under general anesthesia. ECT is viable treatment for patients with severe depression or who show resistance to antidepressants although the mechanisms through which it works remain unknown. A common side effect is confusion and memory loss, usually short-term (Schulze-Rauschenbach, Harms, Schlaepfer, Maier, Falkai, & Wagner, 2005). Repetitive TMS is a noninvasive technique administered while a patient is awake. Brief pulsating magnetic fields are delivered to the cortex, inducing electrical activity. TMS has fewer side effects than ECT (Schulze-Rauschenbach et al., 2005), and while outcome studies are mixed, there is evidence that TMS is a promising treatment for patients with MDD who have shown resistance to other treatments (Rosa et al., 2006). Most recently, deep brain stimulation is being examined as a treatment option for patients who did not respond to more traditional treatments like those already described. Deep brain stimulation involves implanting an electrode in the brain. The electrode is connected to an implanted neurostimulator, which electrically stimulates that particular brain region. Although there is some evidence of its effectiveness (Mayberg et al., 2005), additional research is needed.

Several psychosocial treatments have received strong empirical support, meaning that independent investigations have achieved similarly positive results—a high threshold for examining treatment outcomes. These treatments include but are not limited to behavior therapy, cognitive therapy, and interpersonal therapy. Behavior therapies focus on increasing the frequency and quality of experiences that are pleasant or help the patient achieve mastery.

Cognitive therapies primarily focus on helping patients identify and change distorted automatic thoughts and assumptions (e.g., Beck, 1967). Cognitive-behavioral therapies are based on the rationale that thoughts, behaviors, and emotions affect and are affected by each other. Interpersonal Therapy for Depression focuses largely on improving interpersonal relationships by targeting problem areas, specifically unresolved grief, interpersonal role disputes, role transitions, and interpersonal deficits. Finally, there is also some support for the effectiveness of Short-Term Psychodynamic Therapy for Depression (Leichsenring, 2001). The short-term treatment focuses on a limited number of important issues, and the therapist tends to be more actively involved than in more traditional psychodynamic therapy.

Bipolar Disorders

Patients with BD are typically treated with pharmacotherapy. Antidepressants such as SSRIs and SNRIs are the primary choice of treatment for depression, whereas for BD, lithium is the first line treatment choice. This is because SSRIs and SNRIs have the potential to induce mania or hypomania in patients with BD. Lithium acts on several neurotransmitter systems in the brain through complex mechanisms, including reduction of excitatory (dopamine and glutamate) neurotransmission, and increasing of inhibitory (GABA) neurotransmission (Lenox & Hahn, 2000). Lithium has strong efficacy for the treatment of BD (Geddes, Burgess, Hawton, Jamison, & Goodwin, 2004). However, a number of side effects can make lithium treatment difficult for patients to tolerate. Side effects include impaired cognitive function (Wingo, Wingo, Harvey, & Baldessarini, 2009), as well as physical symptoms such as nausea, tremor, weight gain, and fatigue (Dunner, 2000). Some of these side effects can improve with continued use; however, medication noncompliance remains an ongoing concern in the treatment of patients with BD. Anticonvulsant medications (e.g., carbamazepine, valproate) are also commonly used to treat patients with BD, either alone or in conjunction with lithium.

There are several adjunctive treatment options for people with BD. Interpersonal and social rhythm therapy (IPSRT; Frank et al., 1994) is a psychosocial intervention focused on addressing the mechanism of action posited in social *zeitgeber* theory to predispose patients who have BD to relapse, namely sleep disruption. A growing body of literature provides support for the central role of sleep dysregulation in BD (Harvey, 2008). Consistent with this literature, IPSRT aims to increase rhythmicity of patients' lives and encourage vigilance in maintaining a stable rhythm. The therapist and patient work to develop and maintain a healthy balance of activity and stimulation such that the patient does not become overly active (e.g., by taking on too many projects) or inactive (e.g., by avoiding social contact). The efficacy of IPSRT has been demonstrated in that patients who received this treatment show reduced risk of episode recurrence and are more likely to remain well (Frank et al., 2005).

Conclusion

Everyone feels down or euphoric from time to time. For some people, these feelings can last for long periods of time and can also co-occur with other symptoms that, in combination, interfere with their everyday lives. When people experience an MDE or a manic episode, they see the world differently. During an MDE, people often feel hopeless about the future, and may even experience suicidal thoughts. During a manic episode, people often behave in ways that are risky or place them in danger. They may spend money excessively or have unprotected sex, often expressing deep shame over these decisions after the episode. MDD and BD cause significant problems for people at school, at work, and in their relationships and affect people regardless of gender, age, nationality, race, religion, or sexual orientation. If you or someone you know is suffering from a mood disorder, it is important to seek help. Effective treatments are available and continually improving. If you have an interest in mood disorders, there are many ways to contribute to their understanding, prevention, and treatment, whether by engaging in research or clinical work.

Outside Resources

Books: Recommended memoirs include A Memoir of Madness by William Styron (MDD); Noonday Demon: An Atlas of Depression by Andrew Solomon (MDD); and An Unquiet Mind: A Memoir of Moods and Madness by Kay Redfield (BD).

Web: Visit the Association for Behavioral and Cognitive Therapies to find a list of the recommended therapists and evidence-based treatments.
http://www.abct.org

Web: Visit the Depression and Bipolar Support Alliance for educational information and social support options.
http://www.dbsalliance.org/

Discussion Questions

1. What factors might explain the large gender difference in the prevalence rates of MDD?

2. Why might American ethnic minority groups experience more persistent BD than European Americans?

3. Why might the age of onset for MDD be decreasing over time?

4. Why might overnight travel constitute a potential risk for a person with BD?

5. What are some reasons positive life events may precede the occurrence of manic episode?

Vocabulary

Anhedonia
Loss of interest or pleasure in activities one previously found enjoyable or rewarding.

Attributional style
The tendency by which a person infers the cause or meaning of behaviors or events.

Chronic stress
Discrete or related problematic events and conditions which persist over time and result in prolonged activation of the biological and/or psychological stress response (e.g., unemployment, ongoing health difficulties, marital discord).

Early adversity
Single or multiple acute or chronic stressful events, which may be biological or psychological in nature (e.g., poverty, abuse, childhood illness or injury), occurring during childhood and resulting in a biological and/or psychological stress response.

Grandiosity
Inflated self-esteem or an exaggerated sense of self-importance and self-worth (e.g., believing one has special powers or superior abilities).

Hypersomnia
Excessive daytime sleepiness, including difficulty staying awake or napping, or prolonged sleep episodes.

Psychomotor agitation
Increased motor activity associated with restlessness, including physical actions (e.g., fidgeting, pacing, feet tapping, handwringing).

Psychomotor retardation
A slowing of physical activities in which routine activities (e.g., eating, brushing teeth) are performed in an unusually slow manner.

Social zeitgeber
Zeitgeber is German for "time giver." Social zeitgebers are environmental cues, such as meal times and interactions with other people, that entrain biological rhythms and thus sleep-wake cycle regularity.

Socioeconomic status (SES)

A person's economic and social position based on income, education, and occupation.

Suicidal ideation

Recurring thoughts about suicide, including considering or planning for suicide, or preoccupation with suicide.

References

Abramson, L. Y, Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74. doi: 10.1037/0021-843X.87.1.49

Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*, 358–373. doi: 10.1037/0022-3514.56.3.431

Altshuler, L., Bookheimer, S., Townsend, J., Proenza, M. A., Sabb, F., Mintz, J., & Cohen, M. S. (2008). Regional brain changes in bipolar I depression: A functional magnetic resonance imaging study. *Bipolar Disorders, 10*, 708–717. doi: 10.1111/j.1399-5618.2008.00617.x

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York, NY: Hoeber.

Blazer, D., George, L. K., Landerman, R., Pennybacker, M., Melville, M. L., Woodbury, M., et al. (1985). Psychiatric disorders. A rural/urban comparison. *Archives of General Psychiatry, 42*, 651–656. PMID: 4015306. doi: 10.1001/archpsyc.1985.01790300013002

Breslau, J., Aguilar-Gaxiola, S., Kendler, K. S., Su, M., Williams, D., & Kessler, R. C. (2006). Specifying race-ethnic differences in risk for psychiatric disorder in a US national sample. *Psychological Medicine, 36*, 57–68. doi: 10.1017/S0033291705006161

Breslau, J., Kendler, K. S., Su, M., Gaxiola-Aguilar, S., & Kessler, R. C. (2005). Lifetime risk and persistence of psychiatric disorders across ethnic groups in the United States. *Psychological Medicine, 35*, 317–327. doi: 10.1017/S0033291704003514

Brown, G. W., & Harris, T. O. (1989). *Life events and illness*. New York, NY: Guilford Press.

Butzlaff, R. L., & Hooley, J. M. (1998). Expressed emotion and psychiatric relapse: A meta-analysis. *Archives of General Psychiatry, 55*, 547–552. doi: 10.1001/archpsyc.55.6.547

Chentsova-Dutton, Y. E., & Tsai, J. L. (2009). Understanding depression across cultures. In I. H. Gotlib & C.L. Hammen (Eds.), *Handbook of depression* (2nd ed., pp. 363–385). New York, NY: Guilford Press.

Conley, C. S., & Rudolph, K. D. (2009). The emerging sex difference in adolescent depression: Interacting contributions of puberty and peer stress. *Development and Psychopathology, 21*, 593–620. doi: 10.1017/S0954579409000327

Dunner, D. L. (2000). Optimizing lithium treatment. *Journal of Clinical Psychiatry, 61*(S9), 76–81.

Ehlers, C. L., Frank, E., & Kupfer, D. J. (1988). Social zeitgebers and biological rhythms: a unified approach to understanding the etiology of depression. *Archives of General Psychiatry, 45*, 948–952. doi: 10.1001/archpsyc.1988.01800340076012

Ellicott, A., Hammen, C., Gitlin, M., Brown, G., & Jamison, K. (1990). Life events and the course of bipolar disorder. *American Journal of Psychiatry, 147*, 1194–1198.

Frank, E., Kupfer, D. J., Ehlers, C. L., Monk, T., Cornes, C., Carter, S., et al. (1994). Interpersonal and social rhythm therapy for bipolar disorder: Integrating interpersonal and behavioral approaches. *Behavior Therapy, 17*, 143–149.

Frank, E., Kupfer, D. J., Thase, M. E., Mallinger, A. G., Swartz, H. A., Fagiolini, A. M., et al. (2005). Two-year outcomes for interpersonal and social rhythm therapy in individuals with bipolar I disorder. *Archives of General Psychiatry, 62*, 996–1004. doi: 10.1001/archpsyc.62.9.996

Geddes, J. R., Burgess, S., Hawton, K., Jamison, K., & Goodwin, G. M. (2004). Long-term lithium therapy for bipolar disorder: systematic review and meta-analysis of randomized controlled trials. *American Journal of Psychiatry, 161*, 217–222. doi: 10.1176/appi.ajp.161.2.217

Gonzalez, J. M., Perlick, D. A., Miklowitz, D. J., Kaczynski, R., Hernandez, M., Rosenheck, R. A., et al. (2007). Factors associated with stigma among caregivers of patients with bipolar disorder in the STEP-BD study. *Psychiatric Services, 58*, 41–48. doi: 10.1176/appi.ps.58.1.41

Goodwin, F. K., & Jamison, K. R. (2007). *Manic-depressive illness: Bipolar disorders and recurrent depression*. New York, NY: Oxford University Press.

Gotlib, I. H., & Joormann, J. (2010). Cognition and depression: Current status and future directions. *Annual Review of Clinical Psychology, 6*, 285–312. doi: 10.1146/annurev.clinpsy.121208.131305

Hamilton, J. P., Etkin, A., Furman, D. F., Lemus, M. G., Johnson, R. F., & Gotlib, I. H. (2012). Functional neuroimaging of major depressive disorder: A meta-analysis and new integration of baseline activation and neural response data. *American Journal of Psychiatry, 169*, 693–703.

Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology, 1*, 293–319. doi: 10.1146/annurev.clinpsy.1.102803.143938

Harvey, A. G. (2008). Sleep and Circadian Rhythms in Bipolar Disorder: Seeking synchrony, harmony and regulation. *American Journal of Psychiatry, 165*, 820–829. doi: 10.1176/appi.ajp.2008.08010098

Hasin, D. S., Goodwin, R. D., Sintson, F. S., & Grant, B. F. (2005). Epidemiology of major depressive disorder: Results from the National Epidemiological Survey on Alcoholism and Related Conditions. *Archives of General Psychiatry, 62*, 1097–1106. doi: 10.1001/archpsyc.62.10.1097

Hassel, S., Almeida, J. R., Kerr, N., Nau, S., Ladouceur, C. D., Fissell, K., et al. (2008). Elevated striatal and decreased dorsolateral prefrontal cortical activity in response to emotional stimuli in euthymic bipolar disorder: No associations with psychotropic medication load. *Bipolar Disorders, 10*, 916–927. doi: 10.1111/j.1399-5618.2008.00641.x

Isaacowitz, D. M., Gershon, A., Allard, E. S., & Johnson, S. L. (2013). Emotion in aging and bipolar disorder: Similarities, differences and lessons for further research. *Emotion Review, 5*, 312–320. doi: 10.1177/1754073912472244

Johnson, S. L. (2005). Mania and dysregulation in goal pursuit: A review. *Clinical Psychology Review, 25*, 241–262. doi: 10.1016/j.cpr.2004.11.002

Johnson, S. L., Cueller, A. K., Ruggero, C., Winett-Perlman, C., Goodnick, P., White, R., et al. (2008). Life events as predictors of mania and depression in bipolar I disorder. *Journal of Abnormal Psychology, 117*, 268–277. doi: 10.1037/0021-843X.117.2.268

Johnson, S. L., Winett, C. A., Meyer, B., Greenhouse, W. J., & Miller, I. (1999). Social support and the course of bipolar disorder. *Journal of Abnormal Psychology, 108*, 558–566. doi: 10.1037/0021-843X.108.4.558

Kessler, R. C., Berglund, P., Demler, O., Jim, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602. doi: 10.1001/archpsyc.62.6.593

Kessler, R. C., Birnbaum, H., Bromet, E., Hwang, I., Sampson, N., & Shahly, V. (2010). Age differences in major depression: Results from the National Comorbidity Surveys Replication (NCS-R). *Psychological Medicine, 40*, 225–237. doi: 10.1017/S0033291709990213

Kessler, R. C., Merikangas, K. R., & Wang, P. S. (2007). Prevalence, comorbidity, and service utilization for mood disorders in the United States at the beginning of the 21st century. *Annual Review of Clinical Psychology, 3*, 137–158. doi: 10.1146/annurev.clinpsy.3.022806.091444

Kilbourne, A. M., Haas, G. L., Mulsant, B. H., Bauer, M. S., & Pincus, H. A. (2004) Concurrent psychiatric diagnoses by age and race among persons with bipolar disorder. *Psychiatric Services, 55*, 931–933. doi: 10.1176/appi.ps.55.8.931

Leichsenring, F. (2001). Comparative effects of short-term psychodynamic psychotherapy and cognitive-behavioral therapy in depression: A meta-analytic approach. *Clinical Psychology Review, 21*, 401–419. doi: 10.1016/S0272-7358(99)00057-4

Lennox, B. R., Jacob, R., Calder, A. J., Lupson, V., & Bullmore, E. T. (2004). Behavioural and neurocognitive responses to sad facial affect are attenuated in patients with mania. *Psychological Medicine, 34*, 795–802. doi: 10.1017/S0033291704002557

Lenox, R. H., & Hahn C. G. (2000). Overview of the mechanism of action of lithium in the brain:

fifty-year update. *Journal of Clinical Psychiatry, 61* (S9), 5–15.

Leverich, G. S., Altshuler, L. L., Frye, M. A., Suppes, T., Keck, P. E. Jr, McElroy, S. L., et al. (2003). Factors associated with suicide attempts in 648 patients with bipolar disorder in the Stanley Foundation Bipolar Network. *Journal of Clinical Psychiatry, 64*, 506–515. doi: 10.4088/JCP. v64n0503

Leverich, G. S., Post, R. M., Keck, P. E. Jr, Altshuler, L. L., Frye, M. A., Kupka, R. W., et al. (2007). The poor prognosis of childhood-onset bipolar disorder. *Journal of Pediatrics, 150*, 485–490. PMID: 17452221. doi: 10.1016/j.jpeds.2006.10.070

Lewinsohn, P. M., Allen, N. B., Seeley, J. R., & Gotlib, I. H. (1999). First onset versus recurrence of depression: differential processes of psychosocial risk. *Journal of Abnormal Psychology, 108*, 483–489. doi: 10.1037/0021-843X.108.3.483

Lewinsohn, P. M., Seeley, J. R., Buckley, M. E., & Klein, D. N. (2002). Bipolar disorder in adolescence and young adulthood. *Child & Adolescent Psychiatric Clinics of North America, 11*, 461–475. doi: 10.1016/S1056-4993(02)00005-6

Lohoff, F. W. (2010). Overview of genetics of major depressive disorder. *Current Psychiatry Reports, 12*, 539–546. doi: 10.1007/s11920-010-0150-6

Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P., & Ansseau, A. (2003). Socioeconomic inequalities in depression: A meta-analysis. *American Journal of Epidemiology, 157*, 98–112. doi: 10.1093/aje/kwf182

Malkoff-Schwartz, S., Frank, E., Anderson, B. P., Sherrill, J. T., Siegel, L., Patterson, D., et al. (1998). Stressful life events and social rhythm disruption in the onset of manic and depressive bipolar episodes: a preliminary investigation. *Archives of General Psychiatry, 55*, 702–707. doi: 10.1001/archpsyc.55.8.702

Mayberg, H. S., Lozano, A. M., Voon, V., McNeely, H. E., Seminowixz, D., Hamani, C., Schwalb, J. M., & Kennedy, S. H. (2005). Deep brain stimulation for treatment-resistant depression. *Neuron, 45*, 651–660. doi: 10.1016/j.neuron.2005.02.014

McElroy, S. L., Altshuler, L. L., Suppes, T., Keck, P. E. Jr, Frye, M. A., Denicoff, K. D., et al. (2001). Axis I psychiatric comorbidity and its relationship to historical illness variables in 288 patients with bipolar disorder. *American Journal of Psychiatry, 158*, 420–426. doi: 10.1176/appi.ajp.158.3.420

McGuffin, P., Rijsdijk, F., Andrew, M., Sham, P., Katz, R., Cardno, A. (2003). The heritability of bipolar affective disorder and the genetic relationship to unipolar depression. *Archives of General Psychiatry, 60*, 497–502. doi: 10.1001/archpsyc.60.5.497

Merikangas, K. R., Akiskal, H. S., Angst, J., Greenberg, P. E., Hirschfeld, R. M., Petukhova, M., et al. (2007). Lifetime and 12-month prevalence of bipolar spectrum disorder in the National

Comorbidity Survey replication. *Archives of General Psychiatry, 64*, 543–552. doi: 10.1001/archpsyc.64.5.543

Merikangas, K. R., Jin, R., He, J. P., Kessler, R. C., Lee, S., Sampson, N. A., et al. (2011). Prevalence and correlates of bipolar spectrum disorder in the world mental health survey initiative. *Archives of General Psychiatry, 68*, 241–251. doi: 10.1001/archgenpsychiatry.2011.12

Minsky, S., Vega, W., Miskimen, T., Gara, M., & Escobar, J. (2003). Diagnostic patterns in Latino, African American, and European American psychiatric patients. *Archives of General Psychiatry, 60*, 637–644. doi: 10.1001/archpsyc.60.6.637

Monroe, S. M., & Harkness, K. L. (2011). Recurrence in major depression: A conceptual analysis. *Psychological Review, 118*, 655–674. doi: 10.1037/a0025190

Monroe, S. M., & Harkness, K. L. (2005). Life stress, the "Kindling" hypothesis, and the recurrence of depression: Considerations from a life stress perspective. *Psychological Review, 112*, 417–445. doi: 10.1037/0033-295X.112.2.417

Monroe, S.M., Slavich, G.M., Georgiades, K. (2009). The social environment and life stress in depression. In Gotlib, I.H., Hammen, C.L (Eds.) *Handbook of depression* (2nd ed., pp. 340-360). New York, NY: Guilford Press.

Nolen-Hoeksema, S., & Hilt, L. M. (2009). Gender differences in depression. In I. H. Gotlib & Hammen, C. L. (Eds.), *Handbook of depression* (2nd ed., pp. 386–404). New York, NY: Guilford Press.

Perlis, R. H., Miyahara, S., Marangell, L. B., Wisniewski, S. R., Ostacher, M., DelBello, M. P., et al. (2004). Long-term implications of early onset in bipolar disorder: data from the first 1000 participants in the systematic treatment enhancement program for bipolar disorder (STEP-BD). *Biological Psychiatry, 55*, 875–881. PMID: 15110730. doi: 10.1016/j.pscychresns.2007.10.003

Rosa, M. A., Gattaz, W. F., Pascual-Leone, A., Fregni, F., Rosa, M. O., Rumi, D. O., ... Marcolin, M. A. (2006). Comparison of repetitive transcranial magnetic stimulation and electroconvulsive therapy in unipolar non-psychotic refractory depression: a randomized, single-blind study. *International Journal of Neuropsychopharmacology, 9*, 667–676. doi: 10.1017/S1461145706007127

Schulze-Rauschenbach, S. C., Harms, U., Schlaepfer, T. E., Maier, W., Falkai, P., & Wagner, M. (2005). Distinctive neurocognitive effects of repetitive transcranial magnetic stimulation and electroconvulsive therapy in major depression. *British Journal of Psychiatry, 186*, 410–416. doi: 10.1192/bjp.186.5.410

Shields, B. (2005). *Down Came the Rain: My Journey Through Postpartum Depression*. New York: Hyperion.

Sullivan, P., Neale, M. C., & Kendler, K. S. (2000). Genetic epidemiology of major depression:

Review and meta-analysis. *American Journal of Psychiatry, 157*, 1552–1562. doi: 10.1176/appi.ajp.157.10.1552

Twenge, J. M., & Nolen-Hoeksema, S. (2002). Age, gender, race, SES, and birth cohort differences on the Children's Depression Inventory: A meta-analysis. *Journal of Abnormal Psychology, 111*, 578–588. doi: 10.1037/0021-843X.111.4.578

Whisman, M. A., & Uebelacker, L. A. (2009). Prospective associations between marital discord and depressive symptoms in middle-aged and older adults. *Psychology and Aging, 24*, 184–189. doi: 10.1037/a0014759

Widom, C. S., DuMont, K., & Czaja, S. J. (2007). A prospective investigation of major depressive disorder and comorbidity in abused and neglected children grown up. *Archives of General Psychiatry, 64*, 49–56. doi: 10.1001/archpsyc.64.1.49

Williams, D. R., Gonzalez, H. M., Neighbors, H., Nesse, R., Abelson, J. M., Sweetman, J., & Jackson, J. S. (2007). Prevalence and distribution of major depressive disorder in African Americans, Caribbean blacks, and non-Hispanic whites: Results from the National Survey of American Life. *Archives of General Psychiatry, 64*, 305–315. doi: 10.1001/archpsyc.64.3.305

Wingo, A. P., Wingo, T. S., Harvey, P. D., & Baldessarini, R. J. (2009). Effects of lithium on cognitive performance: a meta-analysis. *Journal of Clinical Psychiatry, 70*, 1588–1597. doi: 10.4088/JCP.08r04972

16
Schizophrenia Spectrum Disorders

Deanna M. Barch

Schizophrenia and the other psychotic disorders are some of the most impairing forms of psychopathology, frequently associated with a profound negative effect on the individual's educational, occupational, and social function. Sadly, these disorders often manifest right at time of the transition from adolescence to adulthood, just as young people should be evolving into independent young adults. The spectrum of psychotic disorders includes schizophrenia, schizoaffective disorder, delusional disorder, schizotypal personality disorder, schizophreniform disorder, brief psychotic disorder, as well as psychosis associated with substance use or medical conditions. In this module, we summarize the primary clinical features of these disorders, describe the known cognitive and neurobiological changes associated with schizophrenia, describe potential risk factors and/or causes for the development of schizophrenia, and describe currently available treatments for schizophrenia.

Learning Objectives

- Describe the signs and symptoms of schizophrenia and related psychotic disorders.
- Describe the most well-replicated cognitive and neurobiological changes associated with schizophrenia.
- Describe the potential risk factors for the development of schizophrenia.
- Describe the controversies associated with "clinical high risk" approaches to identifying individuals at risk for the development of schizophrenia.
- Describe the treatments that work for some of the symptoms of schizophrenia.

The phenomenology of schizophrenia and related psychotic disorders

Most of you have probably had the experience of walking down the street in a city and seeing a person you thought was acting oddly. They may have been dressed in an unusual way, perhaps disheveled or wearing an unusual collection of clothes, makeup, or jewelry that did not seem to fit any particular group or subculture. They may have been talking to themselves or yelling at someone you could not see. If you tried to speak to them, they may have been difficult to follow or understand, or they may have acted paranoid or started telling a bizarre story about the people who were plotting against them. If so, chances are that you have encountered an individual with schizophrenia or another type of psychotic disorder. If you have watched the movie *A Beautiful Mind* or *The Fisher King*, you have also seen a portrayal of someone thought to have schizophrenia. Sadly, a few of the individuals who have committed some of the recently highly publicized mass murders may have had schizophrenia, though most people who commit such crimes do not have schizophrenia. It is also likely that you have met people with schizophrenia without ever knowing it, as they may suffer in silence or stay isolated to protect themselves from the horrors they see, hear, or believe are operating in the outside world. As these examples begin to illustrate, psychotic disorders involve many different types of symptoms, including delusions, hallucinations, disorganized speech and behavior, abnormal motor behavior (including **catatonia**), and negative symptoms such **anhedonia/amotivation** and blunted affect/reduced speech.

Under Surveillance: Abstract groups like the police or the government are commonly the focus of a schizophrenic's persecutory delusions. [Image: Thomas Hawk, https://goo.gl/qsrqiR, CC BY-NC 2.0, https://goo.gl/VnKlK8]

Delusions are false beliefs that are often fixed, hard to change even when the person is presented with conflicting information, and are often culturally influenced in their content (e.g., delusions involving Jesus in Judeo-Christian cultures, delusions involving Allah in Muslim cultures). They can be terrifying for the person, who may remain convinced that they are true even when loved ones and friends present them with clear information that they cannot be true. There are many different types or themes to delusions.

The most common delusions are persecutory and involve the belief that individuals or

groups are trying to hurt, harm, or plot against the person in some way. These can be people that the person knows (people at work, the neighbors, family members), or more abstract groups (the FBI, the CIA, aliens, etc.). Other types of delusions include grandiose delusions, where the person believes that they have some special power or ability (e.g., I am the new Buddha, I am a rock star); referential delusions, where the person believes that events or objects in the environment have special meaning for them (e.g., that song on the radio is being played *specifically* for me); or other types of delusions where the person may believe that others are controlling their thoughts and actions, their thoughts are being broadcast aloud, or that others can read their mind (or they can read other people's minds).

When you see a person on the street talking to themselves or shouting at other people, they are experiencing **hallucinations**. These are perceptual experiences that occur even when there is no stimulus in the outside world generating the experiences. They can be auditory, visual, olfactory (smell), gustatory (taste), or somatic (touch). The most common hallucinations in psychosis (at least in adults) are auditory, and can involve one or more voices talking about the person, commenting on the person's behavior, or giving them orders. The content of the hallucinations is frequently negative ("you are a loser," "that drawing is stupid," "you should go kill yourself") and can be the voice of someone the person knows or a complete stranger. Sometimes the voices sound as if they are coming from outside the person's head. Other times the voices seem to be coming from inside the person's head, but are not experienced the same as the person's inner thoughts or inner speech.

Talking to someone with schizophrenia is sometimes difficult, as their speech may be difficult to follow, either because their answers do not clearly flow from your questions, or because one sentence does not logically follow from another. This is referred to as **disorganized speech**, and it can be present even when the person is writing. **Disorganized behavior** can include odd dress, odd makeup (e.g., lipstick outlining a mouth for 1 inch), or unusual rituals (e.g., repetitive hand gestures). Abnormal motor behavior can include catatonia, which refers to a variety of behaviors that seem to reflect a reduction in responsiveness to the external environment. This can include

People who suffer from schizophrenia may see the world differently. This can include hallucinations, delusions, and disorganized thinking. [Image: Noba Project CCBYNCSA 4.0 https://tinyurl.com/y3k6qoz4]

holding unusual postures for long periods of time, failing to respond to verbal or motor prompts from another person, or excessive and seemingly purposeless motor activity.

Some of the most debilitating symptoms of schizophrenia are difficult for others to see. These include what people refer to as "negative symptoms" or the absence of certain things we typically expect most people to have. For example, anhedonia or amotivation reflect a lack of apparent interest in or drive to engage in social or recreational activities. These symptoms can manifest as a great amount of time spent in physical immobility. Importantly, anhedonia and amotivation do not seem to reflect a lack of enjoyment in pleasurable activities or events (Cohen & Minor, 2010; Kring & Moran, 2008; Llerena, Strauss, & Cohen, 2012) but rather a reduced drive or ability to take the steps necessary to obtain the potentially positive outcomes (Barch & Dowd, 2010). **Flat affect** and reduced speech (**alogia**) reflect a lack of showing emotions through facial expressions, gestures, and speech intonation, as well as a reduced amount of speech and increased pause frequency and duration.

In many ways, the types of symptoms associated with psychosis are the most difficult for us to understand, as they may seem far outside the range of our normal experiences. Unlike depression or anxiety, many of us may not have had experiences that we think of as on the same continuum as psychosis. However, just like many of the other forms of **psychopathology** described in this book, the types of psychotic symptoms that characterize disorders like schizophrenia are on a continuum with "normal" mental experiences. For example, work by Jim van Os in the Netherlands has shown that a surprisingly large percentage of the general population (10%+) experience psychotic-like symptoms, though many fewer have multiple experiences and most will not continue to experience these symptoms in the long run (Verdoux & van Os, 2002). Similarly, work in a general population of adolescents and young adults in Kenya has also shown that a relatively high percentage of individuals experience one or more psychotic-like experiences (~19%) at some point in their lives (Mamah et al., 2012; Ndetei et al., 2012), though again most will not go on to develop a full-blown psychotic disorder.

Schizophrenia is the primary disorder that comes to mind when we discuss "psychotic" disorders (see Table 1 for **diagnostic criteria**), though there are a number of other disorders that share one or more features with schizophrenia. In the remainder of this module, we will use the terms "psychosis" and "schizophrenia" somewhat interchangeably, given that most of the research has focused on schizophrenia. In addition to schizophrenia (see Table 1), other psychotic disorders include schizophreniform disorder (a briefer version of schizophrenia), schizoaffective disorder (a mixture of psychosis and depression/mania symptoms), delusional disorder (the experience of only delusions), and brief psychotic disorder (psychotic symptoms that last only a few days or weeks).

Schizophrenia (Lifetime prevalence about 0.3% to 0.7% [APA, 2013])
• Two or more of the following for at least 1 month: hallucinations, delusions, disorganized speech, grossly disorganized or catatonic behavior, negative symptoms. • Impairment in one or more areas of function (social, occupational, educational self-care) for a significant period of time since the onset of the illness. • Continuous signs of the illness for at least 6 months (this can include prodromal or residual symptoms, which are attenuated forms of the symptoms described above).
Schizophreniform Disorder (Lifetime prevalence similar to Schizophrenia [APA, 2013])
• The same symptoms of schizophrenia described above that are present for at least 1 month but less than 6 months.
Schizoaffective Disorder (Lifetime prevalence about 0.3% [APA, 2013])
• A period of illness where the person has both the psychotic symptoms necessary to meet criteria for schizophrenia and either a major depression or manic episode. •The person experiences either delusions or hallucinations for at least 2 weeks when they are not having a depressive or manic episode. • The symptoms that meet criteria for depressive or manic episodes are present for over half of the illness duration.
Delusional Disorder (Lifetime prevalence about 0.2% [APA, 2013])
• The presence of at least one delusion for at least a month. • The person has never met criteria for schizophrenia. • The person's function is not impaired outside the specific impact of the delusion. • The duration of any depressive or manic episodes have been brief relative to the duration of the delusion(s).
Brief Psychotic Disorder (Lifetime prevalence unclear [APA, 2013])
• One or more of the following symptoms present for at least 1 day but less than 1 month: delusions, hallucinations, disorganized speech, grossly disordered or catatonic behavior.
Attenuated Psychotic Disorder (In Section III of the [APA, 2013]-V, Lifetime presence unclear [APA, 2013])
• One or more of the following symptoms in an "attenuated" form: delusions, hallucinations, or disorganized speech. • The symptoms must have occurred at least once a week for the past month and must have started or gotten worse in the past year. • The symptoms must be severe enough to distress or disable the individual or to suggest to others that the person needs clinical help. • The person has never met the diagnostic criteria for a psychotic disorder, and the symptoms are not better attributed to another disorder, to substance use, or to a medical condition.

Table 1: Types of Psychotic Disorders (Simplified from the Diagnostic and Statistical Manual - 5th Edition (DSM-5) (APA, 2013)

The Cognitive Neuroscience of Schizophrenia

As described above, when we think of the core symptoms of psychotic disorders such as schizophrenia, we think of people who hear voices, see visions, and have false beliefs about reality (i.e., delusions). However, problems in cognitive function are also a critical aspect of psychotic disorders and of schizophrenia in particular. This emphasis on cognition in

schizophrenia is in part due to the growing body of research suggesting that cognitive problems in schizophrenia are a major source of disability and loss of functional capacity (Green, 2006; Nuechterlein et al., 2011). The cognitive deficits that are present in schizophrenia are widespread and can include problems with episodic memory (the ability to learn and retrieve new information or episodes in one's life), working memory (the ability to maintain information over a short period of time, such as 30 seconds), and other tasks that require one to "control" or regulate one's behavior (Barch & Ceaser, 2012; Bora, Yucel, & Pantelis, 2009a; Fioravanti, Carlone, Vitale, Cinti, & Clare, 2005; Forbes, Carrick, McIntosh, & Lawrie, 2009; Mesholam-Gately, Giuliano, Goff, Faraone, & Seidman, 2009). Individuals with schizophrenia also have difficulty with what is referred to as "processing speed" and are frequently slower than healthy individuals on almost all tasks. Importantly, these cognitive deficits are present prior to the onset of the illness (Fusar-Poli et al., 2007) and are also present, albeit in a milder form, in the first-degree relatives of people with schizophrenia (Snitz, Macdonald, & Carter, 2006). This suggests that cognitive impairments in schizophrenia reflect part of the risk for the development of psychosis, rather than being an outcome of developing psychosis. Further, people with schizophrenia who have more severe cognitive problems also tend to have more severe negative symptoms and more disorganized speech and behavior (Barch, Carter, & Cohen, 2003; Barch et al., 1999; Dominguez Mde, Viechtbauer, Simons, van Os, & Krabbendam, 2009; Ventura, Hellemann, Thames, Koellner, & Nuechterlein, 2009; Ventura, Thames, Wood, Guzik, & Hellemann, 2010). In addition, people with more cognitive problems have worse function in everyday life (Bowie et al., 2008; Bowie, Reichenberg, Patterson, Heaton, & Harvey, 2006; Fett et al., 2011).

Some with schizophrenia suffer from difficulty with social cognition. They may not be able to detect the meaning of facial expressions or other subtle cues that most other people rely on to navigate the social world. [Image: Ralph Buckley, https://goo.gl/KuBzsD, CC BY-SA 2.0, https://goo.gl/i4GXf5]

Some people with schizophrenia also show deficits in what is referred to as social cognition, though it is not clear whether such problems are separate from the cognitive problems described above or the result of them (Hoe, Nakagami, Green, & Brekke, 2012; Kerr & Neale, 1993; van Hooren et al., 2008). This includes problems with the recognition of emotional expressions on the faces of other individuals (Kohler, Walker, Martin, Healey, & Moberg, 2010) and problems inferring the intentions of other people (theory of mind) (Bora, Yucel, & Pantelis, 2009b).

Individuals with schizophrenia who have more problems with social cognition also tend to have more negative and disorganized symptoms (Ventura, Wood, & Hellemann, 2011), as well as worse community function (Fett et al., 2011).

The advent of neuroimaging techniques such as structural and functional magnetic resonance imaging and positron emission tomography opened up the ability to try to understand the brain mechanisms of the symptoms of schizophrenia as well as the cognitive impairments found in psychosis. For example, a number of studies have suggested that delusions in psychosis may be associated with problems in "salience" detection mechanisms supported by the ventral striatum (Jensen & Kapur, 2009; Jensen et al., 2008; Kapur, 2003; Kapur, Mizrahi, & Li, 2005; Murray et al., 2008) and the anterior prefrontal cortex (Corlett et al., 2006; Corlett, Honey, & Fletcher, 2007; Corlett, Murray, et al., 2007a, 2007b). These are regions of the brain that normally increase their activity when something important (aka "salient") happens in the environment. If these brain regions misfire, it may lead individuals with psychosis to mistakenly attribute importance to irrelevant or unconnected events. Further, there is good evidence that problems in working memory and cognitive control in schizophrenia are related to problems in the function of a region of the brain called the dorsolateral prefrontal cortex (DLPFC) (Minzenberg, Laird, Thelen, Carter, & Glahn, 2009; Ragland et al., 2009). These problems include changes in how the DLPFC works when people are doing working-memory or cognitive-control tasks, and problems with how this brain region is connected to other brain regions important for working memory and cognitive control, including the posterior parietal cortex (e.g., Karlsgodt et al., 2008; J. J. Kim et al., 2003; Schlosser et al., 2003), the anterior cingulate (Repovs & Barch, 2012), and temporal cortex (e.g., Fletcher et al., 1995; Meyer-Lindenberg et al., 2001). In terms of understanding episodic memory problems in schizophrenia, many researchers have focused on medial temporal lobe deficits, with a specific focus on the hippocampus (e.g., Heckers & Konradi, 2010). This is because there is much data from humans and animals showing that the hippocampus is important for the creation of new memories (Squire, 1992). However, it has become increasingly clear that problems with the DLPFC also make important contributions to episodic memory deficits in schizophrenia (Ragland et al., 2009), probably because this part of the brain is important for controlling our use of memory.

In addition to problems with regions such as the DLFPC and medial temporal lobes in schizophrenia described above, magnitude resonance neuroimaging studies have also identified changes in cellular architecture, white matter connectivity, and gray matter volume in a variety of regions that include the prefrontal and temporal cortices (Bora et al., 2011). People with schizophrenia also show reduced overall brain volume, and reductions in brain volume as people get older may be larger in those with schizophrenia than in healthy people (Olabi et al., 2011). Taking antipsychotic medications or taking drugs such as marijuana,

alcohol, and tobacco may cause some of these structural changes. However, these structural changes are not completely explained by medications or substance use alone. Further, both functional and structural brain changes are seen, again to a milder degree, in the first-degree relatives of people with schizophrenia (Boos, Aleman, Cahn, Pol, & Kahn, 2007; Brans et al., 2008; Fusar-Poli et al., 2007; MacDonald, Thermenos, Barch, & Seidman, 2009). This again suggests that that neural changes associated with schizophrenia are related to a genetic risk for this illness.

Risk Factors for Developing Schizophrenia

It is clear that there are important genetic contributions to the likelihood that someone will develop schizophrenia, with consistent evidence from family, twin, and adoption studies. (Sullivan, Kendler, & Neale, 2003). However, there is no "schizophrenia gene" and it is likely that the genetic risk for schizophrenia reflects the summation of many different genes that each contribute something to the likelihood of developing psychosis (Gottesman & Shields, 1967; Owen, Craddock, & O'Donovan, 2010). Further, schizophrenia is a very heterogeneous disorder, which means that two different people with "schizophrenia" may each have very different symptoms (e.g., one has hallucinations and delusions, the other has disorganized speech and negative symptoms). This makes it even more challenging to identify specific genes associated with risk for psychosis. Importantly, many studies also now suggest that at least some of the genes potentially associated with schizophrenia are also associated with other mental health conditions, including bipolar disorder, depression, and autism (Gejman, Sanders, & Kendler, 2011; Y. Kim, Zerwas, Trace, & Sullivan, 2011; Owen et al., 2010; Rutter, Kim-Cohen, & Maughan, 2006).

There are a number of genetic and environmental risk factors associated with higher likelihood of developing schizophrenia including older fathers, complications during pregnancy/delivery, family history of schizophrenia, and growing up in an urban environment. [Image: CC0 Public Domain]

There are also a number of environmental factors that are associated with an increased risk of developing schizophrenia. For example, problems during pregnancy such as increased stress, infection, malnutrition, and/or diabetes have been associated with increased risk of schizophrenia.

In addition, complications that occur at the time of birth and which cause hypoxia (lack of oxygen) are also associated with an increased risk for developing schizophrenia (M. Cannon, Jones, & Murray, 2002; Miller et al., 2011). Children born to older fathers are also at a somewhat increased risk of developing schizophrenia. Further, using cannabis increases risk for developing psychosis, especially if you have other risk factors (Casadio, Fernandes, Murray, & Di Forti, 2011; Luzi, Morrison, Powell, di Forti, & Murray, 2008). The likelihood of developing schizophrenia is also higher for kids who grow up in urban settings (March et al., 2008) and for some minority ethnic groups (Bourque, van der Ven, & Malla, 2011). Both of these factors may reflect higher social and environmental stress in these settings. Unfortunately, none of these risk factors is specific enough to be particularly useful in a clinical setting, and most people with these "risk" factors do not develop schizophrenia. However, together they are beginning to give us clues as the neurodevelopmental factors that may lead someone to be at an increased risk for developing this disease.

An important research area on risk for psychosis has been work with individuals who may be at "clinical high risk." These are individuals who are showing attenuated (milder) symptoms of psychosis that have developed recently and who are experiencing some distress or disability associated with these symptoms. When people with these types of symptoms are followed over time, about 35% of them develop a psychotic disorder (T. D. Cannon et al., 2008), most frequently schizophrenia (Fusar-Poli, McGuire, & Borgwardt, 2012). In order to identify these individuals, a new category of diagnosis, called "Attenuated Psychotic Syndrome," was added to Section III (the section for disorders in need of further study) of the DSM-5 (see Table 1 for symptoms) (APA, 2013). However, adding this diagnostic category to the DSM-5 created a good deal of controversy (Batstra & Frances, 2012; Fusar-Poli & Yung, 2012). Many scientists and clinicians have been worried that including "risk" states in the DSM-5 would create mental disorders where none exist, that these individuals are often already seeking treatment for other problems, and that it is not clear that we have good treatments to stop these individuals from developing to psychosis. However, the counterarguments have been that there is evidence that individuals with high-risk symptoms develop psychosis at a much higher rate than individuals with other types of psychiatric symptoms, and that the inclusion of Attenuated Psychotic Syndrome in Section III will spur important research that might have clinical benefits. Further, there is some evidence that non-invasive treatments such as omega-3 fatty acids and intensive family intervention may help reduce the development of full-blown psychosis (Preti & Cella, 2010) in people who have high-risk symptoms.

Treatment of Schizophrenia

The currently available treatments for schizophrenia leave much to be desired, and the search

for more effective treatments for both the psychotic symptoms of schizophrenia (e.g., hallucinations and delusions) as well as cognitive deficits and negative symptoms is a highly active area of research. The first line of treatment for schizophrenia and other psychotic disorders is the use of antipsychotic medications. There are two primary types of antipsychotic medications, referred to as "typical" and "atypical." The fact that "typical" antipsychotics helped some symptoms of schizophrenia was discovered serendipitously more than 60 years ago (Carpenter & Davis, 2012; Lopez-Munoz et al., 2005). These are drugs that all share a common feature of being a strong block of the D2 type **dopamine** receptor. Although these drugs can help reduce hallucinations, delusions, and disorganized speech, they do little to improve cognitive deficits or negative symptoms and can be associated with distressing motor side effects. The newer generation of antipsychotics is referred to as "atypical" antipsychotics. These drugs have more mixed mechanisms of action in terms of the receptor types that they influence, though most of them also influence D2 receptors. These newer antipsychotics are not necessarily more helpful for schizophrenia but have fewer motor side effects. However, many of the atypical antipsychotics are associated with side effects referred to as the "metabolic syndrome," which includes weight gain and increased risk for cardiovascular illness, Type-2 diabetes, and mortality (Lieberman et al., 2005).

The evidence that cognitive deficits also contribute to functional impairment in schizophrenia has led to an increased search for treatments that might enhance cognitive function in schizophrenia. Unfortunately, as of yet, there are no pharmacological treatments that work consistently to improve cognition in schizophrenia, though many new types of drugs are currently under exploration. However, there is a type of psychological intervention, referred to as cognitive remediation, which has shown some evidence of helping cognition and function in schizophrenia. In particular, a version of this treatment called Cognitive Enhancement Therapy (CET) has been shown to improve cognition, functional outcome, social cognition, and to protect against gray matter loss (Eack et al., 2009; Eack, Greenwald, Hogarty, & Keshavan, 2010; Eack et al., 2010; Eack, Pogue-Geile, Greenwald, Hogarty, & Keshavan, 2010; Hogarty, Greenwald, & Eack, 2006) in young individuals with schizophrenia. The development of new treatments such as Cognitive Enhancement Therapy provides some hope that we will be able to develop new and better approaches to improving the lives of individuals with this serious mental health condition and potentially even prevent it some day.

Outside Resources

Book: Ben Behind His Voices: One family's journal from the chaos of schizophrenia to hope (2011). Randye Kaye. Rowman and Littlefield.

Book: Conquering Schizophrenia: A father, his son, and a medical breakthrough (1997). Peter Wyden. Knopf.

Book: Henry's Demons: Living with schizophrenia, a father and son's story (2011). Henry and Patrick Cockburn. Scribner Macmillan.

Book: My Mother's Keeper: A daughter's memoir of growing up in the shadow of schizophrenia (1997). Tara Elgin Holley. William Morrow Co.

Book: Recovered, Not Cured: A journey through schizophrenia (2005). Richard McLean. Allen and Unwin.

Book: The Center Cannot Hold: My journey through madness (2008). Elyn R. Saks. Hyperion.

Book: The Quiet Room: A journal out of the torment of madness (1996). Lori Schiller. Grand Central Publishing.

Book: Welcome Silence: My triumph over schizophrenia (2003). Carol North. CSS Publishing.

Web: National Alliance for the Mentally Ill. This is an excellent site for learning more about advocacy for individuals with major mental illnesses such as schizophrenia.
http://www.nami.org/

Web: National Institute of Mental Health. This website has information on NIMH-funded schizophrenia research.
http://www.nimh.nih.gov/health/topics/schizophrenia/index.shtml

Web: Schizophrenia Research Forum. This is an excellent website that contains a broad array of information about current research on schizophrenia.
http://www.schizophreniaforum.org/

Discussion Questions

1. Describe the major differences between the major psychotic disorders.

2. How would one be able to tell when an individual is "delusional" versus having non-delusional beliefs that differ from the societal normal? How should cultural and sub-cultural variation been taken into account when assessing psychotic symptoms?

3. Why are cognitive impairments important to understanding schizophrenia?

4. Why has the inclusion of a new diagnosis (Attenuated Psychotic Syndrome) in Section III of the DSM-5 created controversy?

5. What are some of the factors associated with increased risk for developing schizophrenia? If we know whether or not someone has these risk factors, how well can we tell whether they will develop schizophrenia?

6. What brain changes are most consistent in schizophrenia?

7. Do antipsychotic medications work well for all symptoms of schizophrenia? If not, which symptoms respond better to antipsychotic medications?

8. Are there any treatments besides antipsychotic medications that help any of the symptoms of schizophrenia? If so, what are they?

Vocabulary

Alogia
A reduction in the amount of speech and/or increased pausing before the initiation of speech.

Anhedonia/amotivation
A reduction in the drive or ability to take the steps or engage in actions necessary to obtain the potentially positive outcome.

Catatonia
Behaviors that seem to reflect a reduction in responsiveness to the external environment. This can include holding unusual postures for long periods of time, failing to respond to verbal or motor prompts from another person, or excessive and seemingly purposeless motor activity.

Delusions
False beliefs that are often fixed, hard to change even in the presence of conflicting information, and often culturally influenced in their content.

Diagnostic criteria
The specific criteria used to determine whether an individual has a specific type of psychiatric disorder. Commonly used diagnostic criteria are included in the Diagnostic and Statistical Manual of Mental Disorder, 5th Edition (DSM-5) and the Internal Classification of Disorders, Version 9 (ICD-9).

Disorganized behavior
Behavior or dress that is outside the norm for almost all subcultures. This would include odd dress, odd makeup (e.g., lipstick outlining a mouth for 1 inch), or unusual rituals (e.g., repetitive hand gestures).

Disorganized speech
Speech that is difficult to follow, either because answers do not clearly follow questions or because one sentence does not logically follow from another.

Dopamine
A neurotransmitter in the brain that is thought to play an important role in regulating the function of other neurotransmitters.

Episodic memory
The ability to learn and retrieve new information or episodes in one's life.

Flat affect
A reduction in the display of emotions through facial expressions, gestures, and speech intonation.

Functional capacity
The ability to engage in self-care (cook, clean, bathe), work, attend school, and/or engage in social relationships.

Hallucinations
Perceptual experiences that occur even when there is no stimulus in the outside world generating the experiences. They can be auditory, visual, olfactory (smell), gustatory (taste), or somatic (touch).

Magnetic resonance imaging
A set of techniques that uses strong magnets to measure either the structure of the brain (e.g., gray matter and white matter) or how the brain functions when a person performs cognitive tasks (e.g., working memory or episodic memory) or other types of tasks.

Neurodevelopmental
Processes that influence how the brain develops either in utero or as the child is growing up.

Positron emission tomography
A technique that uses radio-labelled ligands to measure the distribution of different neurotransmitter receptors in the brain or to measure how much of a certain type of neurotransmitter is released when a person is given a specific type of drug or does a particularly cognitive task.

Processing speed
The speed with which an individual can perceive auditory or visual information and respond to it.

Psychopathology
Illnesses or disorders that involve psychological or psychiatric symptoms.

Working memory
The ability to maintain information over a short period of time, such as 30 seconds or less.

References

APA. (2013). *Diagnostic and statistical manual of mental disorders, Fifth Edition* (5th ed.). Washington, DC: American Psychiatric Association.

Barch, D. M., & Ceaser, A. E. (2012). Cognition in schizophrenia: Core psychological and neural mechanisms. *Trends in Cognitive Science, 16*, 27–34.

Barch, D. M., & Dowd, E. C. (2010). Goal representations and motivational drive in schizophrenia: The role of prefrontal-striatal interactions. *Schizophrenia Bulletin, 36*(5), 919–934. doi: sbq068 [pii] 10.1093/schbul/sbq068

Barch, D. M., Carter, C. S., & Cohen, J. D. (2003). Context processing deficit in schizophrenia: Diagnostic specificity, 4-week course, and relationships to clinical symptoms. *Journal of Abnormal Psychology, 112*, 132–143.

Barch, D. M., Carter, C. S., Macdonald, A., Sabb, F. W., Noll, D. C., & Cohen, J. D. (1999). Prefrontal cortex and context processing in medication-naive first-episode patients with schizophrenia. *Schizophrenia Research, 36*(1–3), 217–218.

Batstra, L., & Frances, A. (2012). Diagnostic inflation: Causes and a suggested cure. *The Journal of Nervous and Mental Disease, 200*(6), 474–479. doi: 10.1097/NMD.0b013e318257c4a2

Boos, H. B., Aleman, A., Cahn, W., Pol, H. H., & Kahn, R. S. (2007). Brain volumes in relatives of patients with schizophrenia: A meta-analysis. *Archives of General Psychiatry, 64*(3), 297–304.

Bora, E., Fornito, A., Radua, J., Walterfang, M., Seal, M., Wood, S. J., . . . Pantelis, C. (2011). Neuroanatomical abnormalities in schizophrenia: A multimodal voxelwise meta-analysis and meta-regression analysis. *Schizophrenia Research, 127*(1–3), 46–57. doi: 10.1016/j.schres.2010.12.020

Bora, E., Yucel, M., & Pantelis, C. (2009a). Cognitive functioning in schizophrenia, schizoaffective disorder and affective psychoses: Meta-analytic study. *The British Journal of Psychiatry: The Journal of Mental Science, 195*(6), 475–482. doi: 10.1192/bjp.bp.108.055731

Bora, E., Yucel, M., & Pantelis, C. (2009b). Theory of mind impairment in schizophrenia: Meta-analysis. *Schizophrenia Research, 109*(1–3), 1–9. doi: 10.1016/j.schres.2008.12.020

Bourque, F., van der Ven, E., & Malla, A. (2011). A meta-analysis of the risk for psychotic disorders among first- and second-generation immigrants. *Psychological Medicine, 41*(5), 897–910. doi: 10.1017/S0033291710001406

Bowie, C. R., Leung, W. W., Reichenberg, A., McClure, M. M., Patterson, T. L., Heaton, R. K., & Harvey, P. D. (2008). Predicting schizophrenia patients' real-world behavior with specific neuropsychological and functional capacity measures. *Biological Psychiatry, 63*(5), 505–511. doi: 10.1016/j.biopsych.2007.05.022

Bowie, C. R., Reichenberg, A., Patterson, T. L., Heaton, R. K., & Harvey, P. D. (2006). Determinants of real-world functional performance in schizophrenia subjects: Correlations with cognition, functional capacity, and symptoms. *The American Journal of Psychiatry, 163*(3), 418–425. doi: 10.1176/appi.ajp.163.3.418

Brans, R. G., van Haren, N. E., van Baal, G. C., Schnack, H. G., Kahn, R. S., & Hulshoff Pol, H. E. (2008). Heritability of changes in brain volume over time in twin pairs discordant for schizophrenia. *Archives of General Psychiatry, 65*(11), 1259–1268. doi: 10.1001/archpsyc.65.11.1259

Cannon, M., Jones, P. B., & Murray, R. M. (2002). Obstetric complications and schizophrenia: Historical and meta-analytic review. *The American Journal of Psychiatry, 159*(7), 1080–1092.

Cannon, T. D., Cadenhead, K., Cornblatt, B., Woods, S. W., Addington, J., Walker, E., . . . Heinssen, R. (2008). Prediction of psychosis in youth at high clinical risk: A multisite longitudinal study in North America. *Archives of General Psychiatry, 65*(1), 28–37.

Carpenter, W. T., Jr., & Davis, J. M. (2012). Another view of the history of antipsychotic drug discovery and development. *Molecular Psychiatry, 17*(12), 1168–1173. doi: 10.1038/mp.2012.121

Casadio, P., Fernandes, C., Murray, R. M., & Di Forti, M. (2011). Cannabis use in young people: The risk for schizophrenia. *Neuroscience & Biobehavioral Reviews*. doi: S0149-7634(11)00073-X [pii] 10.1016/j.neubiorev.2011.04.007

Cohen, A. S., & Minor, K. S. (2010). Emotional experience in patients with schizophrenia revisited: Meta-analysis of laboratory studies. *Schizophrenia Bulletin, 36*(1), 143–150. doi: 10.1093/schbul/sbn061

Corlett, P. R., Honey, G. D., & Fletcher, P. C. (2007). From prediction error to psychosis: Ketamine as a pharmacological model of delusions. *Journal of Psychopharmacology, 21*(3), 238–252. doi: 21/3/238 [pii] 10.1177/0269881107077716

Corlett, P. R., Honey, G. D., Aitken, M. R., Dickinson, A., Shanks, D. R., Absalom, A. R., . . . Fletcher, P. C. (2006). Frontal responses during learning predict vulnerability to the psychotogenic effects of ketamine: Linking cognition, brain activity, and psychosis. *Archives of General Psychiatry, 63*(6), 611–621. doi: 63/6/611 [pii] 10.1001/archpsyc.63.6.611

Corlett, P. R., Murray, G. K., Honey, G. D., Aitken, M. R., Shanks, D. R., Robbins, T. W., . . . Fletcher, P. C. (2007a). Disrupted prediction-error signal in psychosis: Evidence for an associative account of delusions. *Brain: A Journal of Neurology, 130*(Pt 9), 2387–2400. doi: 10.1093/brain/awm173

Corlett, P. R., Murray, G. K., Honey, G. D., Aitken, M. R., Shanks, D. R., Robbins, T. W., . . . Fletcher, P. C. (2007b). Disrupted prediction-error signal in psychosis: Evidence for an associative

account of delusions. *Brain, 130*(Pt 9), 2387–2400. doi: awm173 [pii] 10.1093/brain/awm173

Dominguez Mde, G., Viechtbauer, W., Simons, C. J., van Os, J., & Krabbendam, L. (2009). Are psychotic psychopathology and neurocognition orthogonal? A systematic review of their associations. *Psychological Bulletin, 135*(1), 157–171. doi: 10.1037/a0014415

Eack, S. M., Greenwald, D. P., Hogarty, S. S., & Keshavan, M. S. (2010). One-year durability of the effects of cognitive enhancement therapy on functional outcome in early schizophrenia. *Schizophrenia Research, 120*(1–3), 210–216. doi: S0920-9964(10)01222-3 [pii] 10.1016/j.schres.2010.03.042

Eack, S. M., Greenwald, D. P., Hogarty, S. S., Cooley, S. J., DiBarry, A. L., Montrose, D. M., & Keshavan, M. S. (2009). Cognitive enhancement therapy for early-course schizophrenia: effects of a two-year randomized controlled trial. *Psychiatr Serv, 60*(11), 1468–1476. doi: 60/11/1468 [pii] 10.1176/appi.ps.60.11.1468

Eack, S. M., Hogarty, G. E., Cho, R. Y., Prasad, K. M., Greenwald, D. P., Hogarty, S. S., & Keshavan, M. S. (2010). Neuroprotective effects of cognitive enhancement therapy against gray matter loss in early schizophrenia: Results from a 2-year randomized controlled trial. *Archives of General Psychiatry, 67*(7), 674–682. doi: 2010.63 [pii] 10.1001/archgenpsychiatry.2010.63

Eack, S. M., Pogue-Geile, M. F., Greenwald, D. P., Hogarty, S. S., & Keshavan, M. S. (2010). Mechanisms of functional improvement in a 2-year trial of cognitive enhancement therapy for early schizophrenia. *Psychological Medicine*, 1–9. doi: S0033291710001765 [pii] 10.1017/S0033291710001765

Fett, A. K., Viechtbauer, W., Dominguez, M. D., Penn, D. L., van Os, J., & Krabbendam, L. (2011). The relationship between neurocognition and social cognition with functional outcomes in schizophrenia: A meta-analysis. *Neuroscience and Biobehavioral Reviews, 35*(3), 573–588. doi: 10.1016/j.neubiorev.2010.07.001

Fioravanti, M., Carlone, O., Vitale, B., Cinti, M. E., & Clare, L. (2005). A meta-analysis of cognitive deficits in adults with a diagnosis of schizophrenia. *Neuropsychology Review, 15*(2), 73–95. doi: 10.1007/s11065-005-6254-9

Fletcher, P. C., Frith, C. D., Grasby, P. M., Shallice, T., Frackowiak, R. S. J., & Dolan, R. J. (1995). Brain systems for encoding and retrieval of auditory-verbal memory: An in vivo study in humans. *Brain, 118*, 401–416.

Forbes, N. F., Carrick, L. A., McIntosh, A. M., & Lawrie, S. M. (2009). Working memory in schizophrenia: A meta-analysis. *Psychological Medicine, 39*(6), 889–905. doi: 10.1017/S0033291708004558

Fusar-Poli, P., & Yung, A. R. (2012). Should attenuated psychosis syndrome be included in DSM-5? *Lancet, 379*(9816), 591–592. doi: 10.1016/S0140-6736(11)61507-9

Fusar-Poli, P., McGuire, P., & Borgwardt, S. (2012). Mapping prodromal psychosis: A critical review of neuroimaging studies. *European Psychiatry: The Journal of the Association of European Psychiatrists, 27*(3), 181–191. doi: 10.1016/j.eurpsy.2011.06.006

Fusar-Poli, P., Perez, J., Broome, M., Borgwardt, S., Placentino, A., Caverzasi, E., . . . McGuire, P. (2007). Neurofunctional correlates of vulnerability to psychosis: A systematic review and meta-analysis. *Neuroscience and Biobehavioral Reviews, 31*(4), 465–484.

Gejman, P. V., Sanders, A. R., & Kendler, K. S. (2011). Genetics of schizophrenia: New findings and challenges. *Annual Review of Genomics and Human Genetics*. doi: 10.1146/annurev-genom-082410-101459

Gottesman, I. I., & Shields, J. (1967). A polygenic theory of schizophrenia. *Proceedings of the National Academy of Sciences of the United States of America, 58*(1), 199–205.

Green, M. F. (2006). Cognitive impairment and functional outcome in schizophrenia and bipolar disorder. *The Journal of Clinical Psychiatry, 67 Suppl 9*, 3–8; discussion 36–42.

Heckers, S., & Konradi, C. (2010). Hippocampal pathology in schizophrenia. *Current Topics in Behavioral Neurosciences, 4*, 529–553.

Hoe, M., Nakagami, E., Green, M. F., & Brekke, J. S. (2012). The causal relationships between neurocognition, social cognition, and functional outcome over time in schizophrenia: A latent difference score approach. *Psychological Medicine*, 1–13. doi: 10.1017/S0033291712000578

Hogarty, G. E., Greenwald, D. P., & Eack, S. M. (2006). Durability and mechanism of effects of cognitive enhancement therapy. *Psychiatric Services, 57*(12), 1751–1757. doi: 57/12/1751 [pii] 10.1176/appi.ps.57.12.1751

Jensen, J., & Kapur, S. (2009). Salience and psychosis: Moving from theory to practise. *Psychological Medicine, 39*(2), 197–198. doi: 10.1017/S0033291708003899

Jensen, J., Willeit, M., Zipursky, R. B., Savina, I., Smith, A. J., Menon, M., . . . Kapur, S. (2008). The formation of abnormal associations in schizophrenia: Neural and behavioral evidence. *Neuropsychopharmacology: Official Publication of the American College of Neuropsychopharmacology, 33*(3), 473–479. doi: 10.1038/sj.npp.1301437

Kapur, S. (2003). Psychosis as a state of aberrant salience: A framework linking biology, phenomenology, and pharmacology in schizophrenia. *American Journal of Psychiatry, 160*(1), 13–23.

Kapur, S., Mizrahi, R., & Li, M. (2005). From dopamine to salience to psychosis—linking biology, pharmacology and phenomenology of psychosis. *Schizophrenia Research, 79*(1), 59–68. doi: 10.1016/j.schres.2005.01.003

Karlsgodt, K. H., van Erp, T. G., Poldrack, R. A., Bearden, C. E., Nuechterlein, K. H., & Cannon,

T. D. (2008). Diffusion tensor imaging of the superior longitudinal fasciculus and working memory in recent-onset schizophrenia. *Biological Psychiatry, 63*(5), 512–518.

Kerr, S. L., & Neale, J. M. (1993). Emotion perception in schizophrenia: Specific deficit or further evidence of generalized poor performance? *Journal of Abnormal Psychology, 102*(2), 312–318.

Kim, J. J., Kwon, J. S., Park, H. J., Youn, T., Kang, D. H., Kim, M. S., . . . Lee, M. C. (2003). Functional disconnection between the prefrontal and parietal cortices during working memory processing in schizophrenia: A [15O]H20 PET study. *American Journal of Psychiatry, 160*, 919–923.

Kim, Y., Zerwas, S., Trace, S. E., & Sullivan, P. F. (2011). Schizophrenia genetics: Where next? *Schizophrenia Bulletin, 37*(3), 456–463. doi: sbr031 [pii] 10.1093/schbul/sbr031

Kohler, C. G., Walker, J. B., Martin, E. A., Healey, K. M., & Moberg, P. J. (2010). Facial emotion perception in schizophrenia: A meta-analytic review. *Schizophrenia Bulletin, 36*(5), 1009–1019. doi: 10.1093/schbul/sbn192

Kring, A. M., & Moran, E. K. (2008). Emotional response deficits in schizophrenia: Insights from affective science. *Schizophrenia Bulletin, 34*(5), 819–834.

Lieberman, J. A., Stroup, T. S., McEvoy, J. P., Swartz, M. S., Rosenheck, R. A., Perkins, D. O., . . . Hsiao, J. K. (2005). Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. *The New England Journal of Medicine, 353*(12), 1209–1223. doi: 10.1056/NEJMoa051688

Llerena, K., Strauss, G. P., & Cohen, A. S. (2012). Looking at the other side of the coin: A meta-analysis of self-reported emotional arousal in people with schizophrenia. *Schizophrenia Research, 142*(1–3), 65–70. doi: 10.1016/j.schres.2012.09.005

Lopez-Munoz, F., Alamo, C., Cuenca, E., Shen, W. W., Clervoy, P., & Rubio, G. (2005). History of the discovery and clinical introduction of chlorpromazine. Annals of *Clinical Psychiatry: Official Journal of the American Academy of Clinical Psychiatrists, 17*(3), 113–135.

Luzi, S., Morrison, P. D., Powell, J., di Forti, M., & Murray, R. M. (2008). What is the mechanism whereby cannabis use increases risk of psychosis? *Neurotoxicity Research, 14*(2–3), 105–112. doi: 10.1007/BF03033802

MacDonald, A. W., III, Thermenos, H. W., Barch, D. M., & Seidman, L. J. (2009). Imaging genetic liability to schizophrenia: Systematic review of FMRI studies of patients' nonpsychotic relatives. *Schizophrenia Bulletin, 35*(6), 1142–1162.

Mamah, D., Mbwayo, A., Mutiso, V., Barch, D. M., Constantino, J. N., Nsofor, T., . . . Ndetei, D. M. (2012). A survey of psychosis risk symptoms in Kenya. *Comprehensive Psychiatry, 53*(5), 516–524. doi: 10.1016/j.comppsych.2011.08.003

March, D., Hatch, S. L., Morgan, C., Kirkbride, J. B., Bresnahan, M., Fearon, P., & Susser, E. (2008).

Psychosis and place. *Epidemiologic Reviews, 30*, 84–100. doi: 10.1093/epirev/mxn006

Mesholam-Gately, R. I., Giuliano, A. J., Goff, K. P., Faraone, S. V., & Seidman, L. J. (2009). Neurocognition in first-episode schizophrenia: A meta-analytic review. *Neuropsychology, 23* (3), 315–336. doi: 10.1037/a0014708

Meyer-Lindenberg, A., Poline, J., Kohn, P. D., Holt, J. L., Egan, M. F., Weinberger, D. R., & Berman, K. F. (2001). Evidence for abnormal cortical functional connectivity during working memory in schizophrenia. *American Journal of Psychiatry, 158*, 1809–1817.

Miller, B., Messias, E., Miettunen, J., Alaraisanen, A., Jarvelin, M. R., Koponen, H., . . . Kirkpatrick, B. (2011). Meta-analysis of paternal age and schizophrenia risk in male versus female offspring. *Schizophrenia Bulletin, 37*(5), 1039–1047. doi: 10.1093/schbul/sbq011

Minzenberg, M. J., Laird, A. R., Thelen, S., Carter, C. S., & Glahn, D. C. (2009). Meta-analysis of 41 functional neuroimaging studies of executive function in schizophrenia. *Archives of General Psychiatry, 66*(8), 811–822. doi: 10.1001/archgenpsychiatry.2009.91

Murray, G. K., Corlett, P. R., Clark, L., Pessiglione, M., Blackwell, A. D., Honey, G., . . . Fletcher, P. C. (2008). Substantia nigra/ventral tegmental reward prediction error disruption in psychosis. *Molecular Psychiatry, 13*(3), 267–276.

Ndetei, D. M., Muriungi, S. K., Owoso, A., Mutiso, V. N., Mbwayo, A. W., Khasakhala, L. I., . . . Mamah, D. (2012). Prevalence and characteristics of psychotic-like experiences in Kenyan youth. *Psychiatry Research, 196*(2–3), 235–242. doi: 10.1016/j.psychres.2011.12.053

Nuechterlein, K. H., Subotnik, K. L., Green, M. F., Ventura, J., Asarnow, R. F., Gitlin, M. J., . . . Mintz, J. (2011). Neurocognitive predictors of work outcome in recent-onset schizophrenia. *Schizophrenia Bulletin, 37 Suppl 2*, S33–40. doi: 10.1093/schbul/sbr084

Olabi, B., Ellison-Wright, I., McIntosh, A. M., Wood, S. J., Bullmore, E., & Lawrie, S. M. (2011). Are there progressive brain changes in schizophrenia? A meta-analysis of structural magnetic resonance imaging studies. *Biological Psychiatry, 70*(1), 88–96. doi: 10.1016/j.biopsych.2011.01.032

Owen, M. J., Craddock, N., & O'Donovan, M. C. (2010). Suggestion of roles for both common and rare risk variants in genome-wide studies of schizophrenia. *Archives of General Psychiatry, 67*(7), 667–673. doi: 10.1001/archgenpsychiatry.2010.69

Preti, A., & Cella, M. (2010). Randomized-controlled trials in people at ultra high risk of psychosis: a review of treatment effectiveness. *Schizophrenia Research, 123*(1), 30–36. doi: 10.1016/j.schres.2010.07.026

Ragland, J. D., Laird, A. R., Ranganath, C., Blumenfeld, R. S., Gonzales, S. M., & Glahn, D. C. (2009). Prefrontal activation deficits during episodic memory in schizophrenia. *American Journal of Psychiatry, 166*(8), 863–874.

Repovs, G., & Barch, D. M. (2012). Working memory related brain network connectivity in individuals with schizophrenia and their siblings. *Frontiers in Human Neuroscience, 6*, 137. doi: 10.3389/fnhum.2012.00137

Rutter, M., Kim-Cohen, J., & Maughan, B. (2006). Continuities and discontinuities in psychopathology between childhood and adult life. *Journal of Child Psychology and Psychiatry, and Aallied Disciplines, 47*(3–4), 276–295. doi: 10.1111/j.1469-7610.2006.01614.x

Schlosser, R., Gesierich, T., Kaufmann, B., Vucurevic, G., Hunsche, S., Gawehn, J., & Stoeter, P. (2003). Altered effective connectivity during working memory performance in schizophrenia: A study with fMRI and structural equation modeling. *Neuroimage, 19*(3), 751–763.

Snitz, B. E., Macdonald, A. W., 3rd, & Carter, C. S. (2006). Cognitive deficits in unaffected first-degree relatives of schizophrenia patients: A meta-analytic review of putative endophenotypes. *Schizophrenia Bulletin, 32*(1), 179–194.

Squire, L.R. (1992). Memory and the hippocampus: A synthesis from findings with rats, monkeys, and humans. *Psychological Review, 99*, 195–231.

Sullivan, P. F., Kendler, K. S., & Neale, M. C. (2003). Schizophrenia as a complex trait: Evidence from a meta-analysis of twin studies. *Archives of General Psychiatry, 60*(12), 1187–1192. doi: 10.1001/archpsyc.60.12.1187

Ventura, J., Hellemann, G. S., Thames, A. D., Koellner, V., & Nuechterlein, K. H. (2009). Symptoms as mediators of the relationship between neurocognition and functional outcome in schizophrenia: a meta-analysis. *Schizophrenia Research, 113*(2–3), 189–199. doi: 10.1016/j.schres.2009.03.035

Ventura, J., Thames, A. D., Wood, R. C., Guzik, L. H., & Hellemann, G. S. (2010). Disorganization and reality distortion in schizophrenia: a meta-analysis of the relationship between positive symptoms and neurocognitive deficits. *Schizophrenia Research, 121*(1–3), 1–14. doi: 10.1016/j.schres.2010.05.033

Ventura, J., Wood, R. C., & Hellemann, G. S. (2011). Symptom domains and neurocognitive functioning can help differentiate social cognitive processes in schizophrenia: A meta-analysis. *Schizophrenia Bulletin*. doi: 10.1093/schbul/sbr067

Verdoux, H., & van Os, J. (2002). Psychotic symptoms in non-clinical populations and the continuum of psychosis. *Schizophrenia Research, 54*(1–2), 59–65.

van Hooren, S., Versmissen, D., Janssen, I., Myin-Germeys, I., a Campo, J., Mengelers, R., . . . Krabbendam, L. (2008). Social cognition and neurocognition as independent domains in psychosis. *Schizophrenia Research, 103*(1–3), 257–265. doi: 10.1016/j.schres.2008.02.022

17
Anxiety and Related Disorders

David H. Barlow & Kristen K. Ellard

Anxiety is a natural part of life and, at normal levels, helps us to function at our best. However, for people with anxiety disorders, anxiety is overwhelming and hard to control. Anxiety disorders develop out of a blend of biological (genetic) and psychological factors that, when combined with stress, may lead to the development of ailments. Primary anxiety-related diagnoses include generalized anxiety disorder, panic disorder, specific phobia, social anxiety disorder (social phobia), post traumatic stress disorder, and obsessive-compulsive disorder. In this module, we summarize the main clinical features of each of these disorders and discuss their similarities and differences with everyday experiences of anxiety.

Learning Objectives

- Understand the relationship between anxiety and anxiety disorders.
- Identify key vulnerabilities for developing anxiety and related disorders.
- Identify main diagnostic features of specific anxiety-related disorders.
- Differentiate between disordered and non-disordered functioning.

Introduction

What is anxiety? Most of us feel some anxiety almost every day of our lives. Maybe you have an important test coming up for school. Or maybe there's that big game next Saturday, or that first date with someone new you are hoping to impress. Anxiety can be defined as a negative mood state that is accompanied by bodily symptoms such as increased heart rate,

muscle tension, a sense of unease, and apprehension about the future (APA, 2013; Barlow, 2002).

Anxiety is what motivates us to plan for the future, and in this sense, anxiety is actually a good thing. It's that nagging feeling that motivates us to study for that test, practice harder for that game, or be at our very best on that date. But some people experience anxiety so intensely that it is no longer helpful or useful. They may become so overwhelmed and distracted by anxiety that they actually fail their test, fumble the ball, or spend the whole date fidgeting and avoiding eye contact. If anxiety begins to interfere in the person's life in a significant way, it is considered a disorder.

While everyone may experience some level of anxiety at one time or another, those with anxiety disorders experience it consistently and so intensely that it has a significantly negative impact on their quality of life. [Image: Bada Bing, https://goo.gl/aawyLi, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Anxiety and closely related disorders emerge from "triple vulnerabilities,"a combination of biological, psychological, and specific factors that increase our risk for developing a disorder (Barlow, 2002; Suárez, Bennett, Goldstein, & Barlow, 2009). **Biological vulnerabilities** refer to specific genetic and neurobiological factors that might predispose someone to develop anxiety disorders. No single gene directly causes anxiety or panic, but our genes may make us more susceptible to anxiety and influence how our brains react to stress (Drabant et al., 2012; Gelernter & Stein, 2009; Smoller, Block, & Young, 2009). **Psychological vulnerabilities** refer to the influences that our early experiences have on how we view the world. If we were confronted with unpredictable stressors or traumatic experiences at younger ages, we may come to view the world as unpredictable and uncontrollable, even dangerous (Chorpita & Barlow, 1998; Gunnar & Fisher, 2006). **Specific vulnerabilities** refer to how our experiences lead us to focus and channel our anxiety (Suárez et al., 2009). If we learned that physical illness is dangerous, maybe through witnessing our family's reaction whenever anyone got sick, we may focus our anxiety on physical sensations. If we learned that disapproval from others has negative, even dangerous consequences, such as being yelled at or severely punished for even the slightest offense, we might focus our anxiety on social evaluation. If we learn that the "other shoe might drop" at any moment, we may focus our anxiety on worries about the future. None of these vulnerabilities directly

causes anxiety disorders on its own—instead, when all of these vulnerabilities are present, and we experience some triggering life stress, an anxiety disorder may be the result (Barlow, 2002; Suárez et al., 2009). In the next sections, we will briefly explore each of the major anxiety based disorders, found in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (APA, 2013).

Generalized Anxiety Disorder

Most of us worry some of the time, and this worry can actually be useful in helping us to plan for the future or make sure we remember to do something important. Most of us can set aside our worries when we need to focus on other things or stop worrying altogether whenever a problem has passed. However, for someone with **generalized anxiety disorder (GAD)**, these worries become difficult, or even impossible, to turn off. They may find themselves worrying excessively about a number of different things, both minor and catastrophic. Their worries also come with a host of other symptoms such as muscle tension, fatigue, agitation or restlessness, irritability, difficulties with sleep (either falling asleep, staying asleep, or both), or difficulty concentrating.The *DSM-5* criteria specify that at least six months of excessive anxiety and worry of this type must be ongoing, happening more days than not for a good proportion of the day, to receive a diagnosis of GAD. About 5.7% of the population has met criteria for GAD at some point during their lifetime (Kessler, Berglund, et al., 2005), making it one of the most common anxiety disorders (see Table 1).

Disorder	1-Year Prevalence Rates [1]	Lifetime Prevalence Rates [2]	Prevalence by Gender	Median Age of Onset
Generalized Anxiety Disorder	3.1%	5.7%	67% female	31 yrs.
OCD	1%	1.6%	55% female	19 yrs.
Panic Disorder	2.7%	4.7%	67% female	24 yrs.
PTSD	3.5%	6.8%	52% female[3]	23 yrs.
Social Anxiety	6.8%	12.1%	50% female	13 yrs.
Specific Phobia	8.7%	12.5%	60% - 90% female [4]	7-9 yrs.

Table 1: Prevalence rates for major anxiety disorders. [1] Kessler et al. (2005), [2]Kessler, Chiu, Demler, Merikangas, & Walters (2005), [3]Kessler, Sonnega, Bromet, Hughes, & Nelson (1995), [4]Craske et al. (1996).

What makes a person with GAD worry more than the average person? Research shows that individuals with GAD are more sensitive and vigilant toward possible threats than people who are not anxious (Aikins & Craske, 2001; Barlow, 2002; Bradley, Mogg, White, Groom, & de Bono, 1999). This may be related to early stressful experiences, which can lead to a view of the world as an unpredictable, uncontrollable, and even dangerous place. Some have suggested that people with GAD worry as a way to gain some control over these otherwise uncontrollable or unpredictable experiences and against uncertain outcomes (Dugas, Gagnon, Ladouceur, & Freeston, 1998). By repeatedly going through all of the possible "What if?" scenarios in their mind, the person might feel like they are less vulnerable to an unexpected outcome, giving them the sense that they have *some* control over the situation (Wells, 2002). Others have suggested people with GAD worry as a way to avoid feeling distressed (Borkovec, Alcaine, & Behar, 2004). For example, Borkovec and Hu (1990) found that those who worried when confronted with a stressful situation had less physiological arousal than those who didn't worry, maybe because the worry "distracted" them in some way.

The problem is, all of this "what if?"-ing doesn't get the person any closer to a solution or an answer and, in fact, might take them away from important things they should be paying attention to in the moment, such as finishing an important project. Many of the catastrophic outcomes people with GAD worry about are very unlikely to happen, so when the catastrophic event doesn't materialize, the act of worrying gets **reinforced** (Borkovec, Hazlett-Stevens, & Diaz, 1999). For example, if a mother spends all night worrying about whether her teenage daughter will get home safe from a night out and the daughter returns home without incident, the mother could easily attribute her daughter's safe return to her successful "vigil." What the mother hasn't learned is that her daughter would have returned home just as safe if she had been focusing on the movie she was watching with her husband, rather than being preoccupied with worries. In this way, the cycle of worry is perpetuated, and, subsequently, people with GAD often miss out on many otherwise enjoyable events in their lives.

Panic Disorder and Agoraphobia

Have you ever gotten into a near-accident or been taken by surprise in some way? You may have felt a flood of physical sensations, such as a racing heart, shortness of breath, or tingling sensations. This alarm reaction is called the "**fight or flight**" response (Cannon, 1929) and is your body's natural reaction to fear, preparing you to either fight or escape in response to threat or danger. It's likely you weren't too concerned with these sensations, because you knew what was causing them. But imagine if this alarm reaction came "out of the blue," for no apparent reason, or in a situation in which you didn't expect to be anxious or fearful. This is called an "unexpected" panic attack or a false alarm. Because there is no apparent reason

or cue for the alarm reaction, you might react to the sensations with intense fear, maybe thinking you are having a heart attack, or going crazy, or even dying. You might begin to associate the physical sensations you felt during this attack with this fear and may start to go out of your way to avoid having those sensations again.

Unexpected panic attacks such as these are at the heart of **panic disorder (PD)**. However, to receive a diagnosis of PD, the person must not only have unexpected panic attacks but also must experience continued intense anxiety and avoidance related to the attack for at least one month, causing significant distress or interference in their lives. People with panic disorder tend to interpret even normal physical sensations in a catastrophic way, which triggers more anxiety and, ironically, more physical sensations, creating a vicious cycle of panic (Clark, 1986, 1996). The person may begin to avoid a number of situations or activities that produce the same physiological arousal that was present during the beginnings of a panic attack. For example, someone who experienced a racing heart during a panic attack might avoid exercise or caffeine. Someone who

Panic disorder is a debilitating condition that leaves sufferers with acute anxiety that persists long after a specific panic attack has subsided. When this anxiety leads to deliberate avoidance of particular places and situations a person may be given a diagnosis of agoraphobia. [Image: Nate Steiner, https://goo.gl/dUYWDf, Public Domain]

experienced choking sensations might avoid wearing high-necked sweaters or necklaces. Avoidance of these **internal bodily or somatic cues** for panic has been termed **interoceptive avoidance** (Barlow & Craske, 2007; Brown, White, & Barlow, 2005; Craske & Barlow, 2008; Shear et al., 1997).

The individual may also have experienced an overwhelming urge to escape during the unexpected panic attack. This can lead to a sense that certain places or situations—particularly situations where escape might not be possible—are not "safe." These situations become **external cues** for panic. If the person begins to avoid several places or situations, or still endures these situations but does so with a significant amount of apprehension and anxiety, then the person also has **agoraphobia** (Barlow, 2002; Craske & Barlow, 1988; Craske & Barlow, 2008). Agoraphobia can cause significant disruption to a person's life, causing them to go out of their way to avoid situations, such as adding hours to a commute to avoid taking the train

or only ordering take-out to avoid having to enter a grocery store. In one tragic case seen by our clinic, a woman suffering from agoraphobia had not left her apartment for 20 years and had spent the past 10 years confined to one small area of her apartment, away from the view of the outside. In some cases, agoraphobia develops in the absence of panic attacks and therefor is a separate disorder in DSM-5. But agoraphobia often accompanies panic disorder.

About 4.7% of the population has met criteria for PD or agoraphobia over their lifetime (Kessler, Chiu, Demler, Merikangas, & Walters, 2005; Kessler et al., 2006) (see Table 1). In all of these cases of panic disorder, what was once an adaptive natural alarm reaction now becomes a learned, and much feared, false alarm.

Specific Phobia

The majority of us might have certain things we fear, such as bees, or needles, or heights (Myers et al., 1984). But what if this fear is so consuming that you can't go out on a summer's day, or get vaccines needed to go on a special trip, or visit your doctor in her new office on the 26th floor? To meet criteria for a diagnosis of specific phobia, there must be an irrational fear of a specific object or situation that substantially interferes with the person's ability to function. For example, a patient at our clinic turned down a prestigious and coveted artist residency because it required spending time near a wooded area, bound to have insects. Another patient purposely left her house two hours early each morning so she could walk past her neighbor's fenced yard before they let their dog out in the morning.

Elevators can be a trigger for sufferers of claustrophobia or agoraphobia. [Image: srgpicker, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

The list of possible phobias is staggering, but four major subtypes of specific phobia are recognized: blood-injury-injection (BII) type, situational type (such as planes, elevators, or enclosed places), natural environment type for events one may encounter in nature (for example, heights, storms, and water), and animal type.

A fifth category "other" includes phobias that do not fit any of the four major subtypes (for example, fears of choking, vomiting, or contracting an illness). Most phobic reactions cause a surge of activity in the sympathetic nervous system and

increased heart rate and blood pressure, maybe even a panic attack. However, people with BII type phobias usually experience a marked *drop* in heart rate and blood pressure and may even faint. In this way, those with BII phobias almost always differ in their physiological reaction from people with other types of phobia (Barlow & Liebowitz, 1995; Craske, Antony, & Barlow, 2006; Hofmann, Alpers, & Pauli, 2009; Ost, 1992). BII phobia also runs in families more strongly than any phobic disorder we know (Antony & Barlow, 2002; Page & Martin, 1998). Specific phobia is one of the most common psychological disorders in the United States, with 12.5% of the population reporting a lifetime history of fears significant enough to be considered a "phobia" (Arrindell et al., 2003; Kessler, Berglund, et al., 2005) (see Table 1). Most people who suffer from specific phobia tend to have multiple phobias of several types (Hofmann, Lehman, & Barlow, 1997).

Social Anxiety Disorder (Social Phobia)

Many people consider themselves shy, and most people find social evaluation uncomfortable at best, or giving a speech somewhat mortifying. Yet, only a small proportion of the population fear these types of situations significantly enough to merit a diagnosis of **social anxiety disorder (SAD)** (APA, 2013). SAD is more than exaggerated shyness (Bogels et al., 2010; Schneier et al., 1996). To receive a diagnosis of SAD, the fear and anxiety associated with social situations must be so strong that the person avoids them entirely, or if avoidance is not possible, the person endures them with a great deal of distress. Further, the fear and avoidance of social situations must get in the way of the person's daily life, or seriously limit their academic or occupational functioning. For example, a patient at our clinic compromised her perfect 4.0 grade point average because she could not complete a required oral presentation in one of her classes, causing her to fail the course. Fears of negative evaluation might make someone repeatedly turn down invitations to social events or avoid having conversations with people, leading to greater and greater isolation.

The specific social situations that trigger anxiety and fear range from one-on-one interactions, such as starting or maintaining a conversation; to performance-based situations, such as giving a speech or performing on stage; to assertiveness, such as asking someone to change disruptive or undesirable behaviors. Fear of social evaluation might even extend to such things as using public restrooms, eating in a restaurant, filling out forms in a public place, or even reading on a train. Any type of situation that could potentially draw attention to the person can become a feared social situation. For example, one patient of ours went out of her way to avoid any situation in which she might have to use a public restroom for fear that someone would hear her in the bathroom stall and think she was disgusting. If the fear is limited to performance-based situations, such as public speaking, a diagnosis of **SAD performance only**

is assigned.

What causes someone to fear social situations to such a large extent? The person may have learned growing up that social evaluation in particular can be dangerous, creating a specific psychological vulnerability to develop social anxiety (Bruch & Heimberg, 1994; Lieb et al., 2000; Rapee & Melville, 1997). For example, the person's caregivers may have harshly criticized and punished them for even the smallest mistake, maybe even punishing them physically.

Or, someone might have experienced a social trauma that had lasting effects, such as being bullied or humiliated. Interestingly, one group of researchers found that 92% of adults in their study sample with social phobia experienced severe teasing and bullying in childhood, compared with only 35% to 50% among people with other anxiety disorders (McCabe, Antony, Summerfeldt, Liss, & Swinson, 2003). Someone else might react so strongly to the anxiety provoked by a social situation that they have an unexpected panic attack. This panic attack then becomes associated (**conditioned response**) with the social situation, causing the person to fear they will panic the next time they are in that situation. This is not considered PD, however, because the person's fear is

Social trauma in childhood may have long-lasting effects. [Image: ihtatho, https://goo.gl/dTzrdj, CC BY-NC 2.0, https://goo.gl/VnKlK8]

more focused on social evaluation than having unexpected panic attacks, and the fear of having an attack is limited to social situations. As many as 12.1% of the general population suffer from social phobia at some point in their lives (Kessler, Berglund, et al., 2005), making it one of the most common anxiety disorders, second only to specific phobia (see Table 1).

Posttraumatic Stress Disorder

With stories of war, natural disasters, and physical and sexual assault dominating the news, it is clear that trauma is a reality for many people. Many individual traumas that occur every day never even make the headlines, such as a car accident, domestic abuse, or the death of a loved one. Yet, while many people face traumatic events, not everyone who faces a trauma

develops a disorder. Some, with the help of family and friends, are able to recover and continue on with their lives (Friedman, 2009). For some, however, the months and years following a trauma are filled with intrusive reminders of the event, a sense of intense fear that another traumatic event might occur, or a sense of isolation and emotional numbing. They may engage in a host of behaviors intended to protect themselves from being vulnerable or unsafe, such as constantly scanning their surroundings to look for signs of potential danger, never sitting with their back to the door, or never allowing themselves to be anywhere alone. This lasting reaction to trauma is what characterizes **posttraumatic stress disorder (PTSD)**.

A diagnosis of PTSD begins with the traumatic event itself. An individual must have been exposed to an event that involves actual or threatened death, serious injury, or sexual violence. To receive a diagnosis of PTSD, exposure to the event must include either directly experiencing the event, witnessing the event happening to someone else, learning that the event occurred to a close relative or friend, or having repeated or extreme exposure to details of the event (such as in the case of first responders). The person subsequently re-experiences the event through both intrusive memories and nightmares. Some memories may come back so vividly that the person feels like they are experiencing the event all over again, what is known as having a **flashback**. The individual may avoid anything that reminds them of the trauma, including conversations, places, or even specific types of people. They may feel emotionally numb or restricted in their ability to feel, which may interfere in their interpersonal relationships. The person may not be able to remember certain aspects of what happened during the event. They may feel a sense of a foreshortened future, that they will never marry, have a family, or live a long, full life. They may be jumpy or easily startled, hypervigilant to their surroundings, and quick to anger. The prevalence of PTSD among the population as a whole is relatively low, with 6.8% having experienced PTSD at some point in their life (Kessler, Berglund, et al., 2005) (see Table 1). Combat and sexual assault are the most common precipitating traumas (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Whereas PTSD was previously categorized as an Anxiety Disorder, in the most recent version of the DSM (DSM-5; APA, 2013) it has been reclassified under the more specific category of Trauma- and Stressor-Related Disorders.

A person with PTSD is particularly sensitive to both internal and external cues that serve as reminders of their traumatic experience. For example, as we saw in PD, the physical sensations of arousal present during the initial trauma can become threatening in and of themselves, becoming a powerful reminder of the event. Someone might avoid watching intense or emotional movies in order to prevent the experience of emotional arousal. Avoidance of conversations, reminders, or even of the experience of emotion itself may also be an attempt to avoid triggering internal cues. External stimuli that were present during the trauma can also become strong triggers. For example, if a woman is raped by a man wearing a red t-shirt,

she may develop a strong alarm reaction to the sight of red shirts, or perhaps even more indiscriminately to anything with a similar color red. A combat veteran who experienced a strong smell of gasoline during a roadside bomb attack may have an intense alarm reaction when pumping gas back at home. Individuals with a psychological vulnerability toward viewing the world as uncontrollable and unpredictable may particularly struggle with the possibility of additional future, unpredictable traumatic events, fueling their need for hypervigilance and avoidance, and perpetuating the symptoms of PTSD.

Obsessive-Compulsive Disorder

Have you ever had a strange thought pop into your mind, such as picturing the stranger next to you naked? Or maybe you walked past a crooked picture on the wall and couldn't resist straightening it. Most people have occasional strange thoughts and may even engage in some "compulsive" behaviors, especially when they are stressed (Boyer & Liénard, 2008; Fullana et al., 2009). But for most people, these thoughts are nothing more than a passing oddity, and the behaviors are done (or not done) without a second thought. For someone with **obsessive-compulsive disorder (OCD)**, however, these thoughts and compulsive behaviors don't just come and go. Instead, strange or unusual thoughts are taken to mean something much more important and real, maybe even something dangerous or frightening. The urge to engage in some behavior, such as straightening a picture, can become so intense that it is nearly impossible *not* to carry it out, or causes significant anxiety if it can't be carried out. Further, someone with OCD might become preoccupied with the possibility that the behavior wasn't carried out to completion and feel compelled to repeat the behavior again and again, maybe several times before they are "satisfied."

To receive a diagnosis of OCD, a person must experience obsessive thoughts and/or compulsions that seem irrational or nonsensical, but that keep coming into their mind. Some examples of obsessions include doubting thoughts (such as doubting a door is locked or an appliance is turned off), thoughts of contamination (such as thinking that touching almost
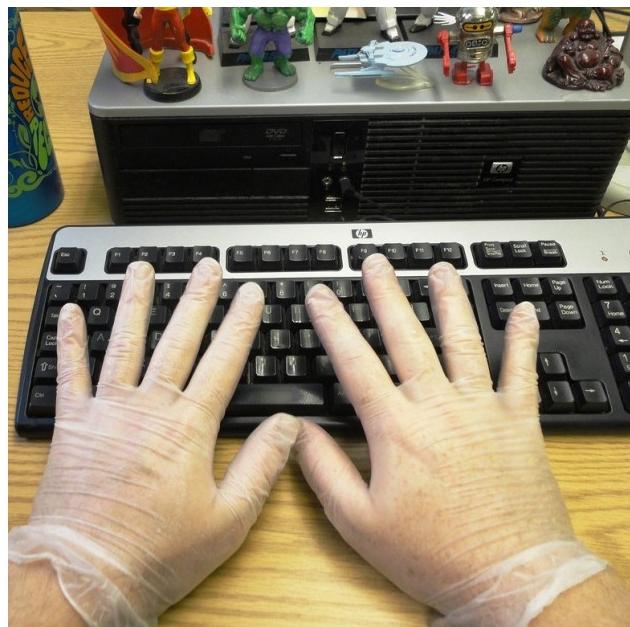
People suffering from OCD may have an irrational fear of germs and "becoming contaminated". [Image: benchilada, https://goo.gl/qemgDm, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

anything might give you cancer), or aggressive thoughts or images that are unprovoked or nonsensical. Compulsions may be carried out in an attempt to neutralize some of these thoughts, providing temporary relief from the anxiety the obsessions cause, or they may be nonsensical in and of themselves. Either way, compulsions are distinct in that they must be repetitive or excessive, the person feels "driven" to carry out the behavior, and the person feels a great deal of distress if they can't engage in the behavior. Some examples of compulsive behaviors are repetitive washing (often in response to contamination obsessions), repetitive checking (locks, door handles, appliances often in response to doubting obsessions), ordering and arranging things to ensure symmetry, or doing things according to a specific ritual or sequence (such as getting dressed or ready for bed in a specific order). To meet diagnostic criteria for OCD, engaging in obsessions and/or compulsions must take up a significant amount of the person's time, at least an hour per day, and must cause significant distress or impairment in functioning. About 1.6% of the population has met criteria for OCD over the course of a lifetime (Kessler, Berglund, et al., 2005) (see Table 1). Whereas OCD was previously categorized as an Anxiety Disorder, in the most recent version of the DSM (DSM-5; APA, 2013) it has been reclassified under the more specific category of Obsessive-Compulsive and Related Disorders.

People with OCD often confuse having an intrusive thought with their potential for carrying out the thought. Whereas most people when they have a strange or frightening thought are able to let it go, a person with OCD may become "stuck" on the thought and be intensely afraid that they might somehow lose control and act on it. Or worse, they believe that having the thought is just as bad as doing it. This is called **thought-action fusion**. For example, one patient of ours was plagued by thoughts that she would cause harm to her young daughter. She experienced intrusive images of throwing hot coffee in her daughter's face or pushing her face underwater when she was giving her a bath. These images were so terrifying to the patient that she would no longer allow herself any physical contact with her daughter and would leave her daughter in the care of a babysitter if her husband or another family was not available to "supervise" her. In reality, the last thing she wanted to do was harm her daughter, and she had no intention or desire to act on the aggressive thoughts and images, nor does anybody with OCD act on these thoughts, but these thoughts were so horrifying to her that she made every attempt to prevent herself from the potential of carrying them out, even if it meant not being able to hold, cradle, or cuddle her daughter. These are the types of struggles people with OCD face every day.

Treatments for Anxiety and Related Disorders

Many successful treatments for anxiety and related disorders have been developed over the years. Medications (anti-anxiety drugs and antidepressants) have been found to be beneficial

for disorders other than specific phobia, but relapse rates are high once medications are stopped (Heimberg et al., 1998; Hollon et al., 2005), and some classes of medications (minor tranquilizers or benzodiazepines) can be habit forming.

Exposure-based CBT aims to help patients recognize and change problematic thoughts and behaviors in real-life situations. A person with a fear of elevators would be encouraged to practice exposure exercises that might involve approaching or riding elevators to attempt to overcome their anxiety. [Image: Mag3737, https://goo.gl/j9L5AQ, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

Exposure-based cognitive behavioral therapies (CBT) are effective psychosocial treatments for anxiety disorders, and many show greater treatment effects than medication in the long term (Barlow, Allen, & Basden, 2007; Barlow, Gorman, Shear, & Woods, 2000). In CBT, patients are taught skills to help identify and change problematic thought processes, beliefs, and behaviors that tend to worsen symptoms of anxiety, and practice applying these skills to real-life situations through exposure exercises. Patients learn how the automatic "appraisals" or thoughts they have about a situation affect both how they feel and how they behave. Similarly, patients learn how engaging in certain behaviors, such as avoiding situations, tends to strengthen the belief that the situation is something to be feared. A key aspect of CBT is exposure exercises, in which the patient learns to gradually approach situations they find fearful or distressing, in order to challenge their beliefs and learn new, less fearful associations about these situations.

Typically 50% to 80% of patients receiving drugs or CBT will show a good initial response, with the effect of CBT more durable. Newer developments in the treatment of anxiety disorders are focusing on novel interventions, such as the use of certain medications to enhance learning during CBT (Otto et al., 2010), and transdiagnostic treatments targeting core, underlying vulnerabilities (Barlow et al., 2011). As we advance our understanding of anxiety and related disorders, so too will our treatments advance, with the hopes that for the many people suffering from these disorders, anxiety can once again become something useful and adaptive, rather than something debilitating.

Outside Resources

American Psychological Association (APA)
http://www.apa.org/topics/anxiety/index.aspx

National Institutes of Mental Health (NIMH)
http://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml

Web: Anxiety and Depression Association of America (ADAA)
http://www.adaa.org/

Web: Center for Anxiety and Related Disorders (CARD)
http://www.bu.edu/card/

Discussion Questions

1. Name and describe the three main vulnerabilities contributing to the development of anxiety and related disorders. Do you think these disorders could develop out of biological factors alone? Could these disorders develop out of learning experiences alone?

2. Many of the symptoms in anxiety and related disorders overlap with experiences most people have. What features differentiate someone with a disorder versus someone without?

3. What is an "alarm reaction?" If someone experiences an alarm reaction when they are about to give a speech in front of a room full of people, would you consider this a "true alarm" or a "false alarm?"

4. Many people are shy. What differentiates someone who is shy from someone with social anxiety disorder? Do you think shyness should be considered an anxiety disorder?

5. Is anxiety ever helpful? What about worry?

Vocabulary

Agoraphobia
A sort of anxiety disorder distinguished by feelings that a place is uncomfortable or may be unsafe because it is significantly open or crowded.

Anxiety
A mood state characterized by negative affect, muscle tension, and physical arousal in which a person apprehensively anticipates future danger or misfortune.

Biological vulnerability
A specific genetic and neurobiological factor that might predispose someone to develop anxiety disorders.

Conditioned response
A learned reaction following classical conditioning, or the process by which an event that automatically elicits a response is repeatedly paired with another neutral stimulus (conditioned stimulus), resulting in the ability of the neutral stimulus to elicit the same response on its own.

External cues
Stimuli in the outside world that serve as triggers for anxiety or as reminders of past traumatic events.

Fight or flight response
A biological reaction to alarming stressors that prepares the body to resist or escape a threat.

Flashback
Sudden, intense re-experiencing of a previous event, usually trauma-related.

Generalized anxiety disorder (GAD)
Excessive worry about everyday things that is at a level that is out of proportion to the specific causes of worry.

Internal bodily or somatic cues
Physical sensations that serve as triggers for anxiety or as reminders of past traumatic events.

Interoceptive avoidance

Avoidance of situations or activities that produce sensations of physical arousal similar to those occurring during a panic attack or intense fear response.

Obsessive-compulsive disorder (OCD)
A disorder characterized by the desire to engage in certain behaviors excessively or compulsively in hopes of reducing anxiety. Behaviors include things such as cleaning, repeatedly opening and closing doors, hoarding, and obsessing over certain thoughts.

Panic disorder (PD)
A condition marked by regular strong panic attacks, and which may include significant levels of worry about future attacks.

Posttraumatic stress disorder (PTSD)
A sense of intense fear, triggered by memories of a past traumatic event, that another traumatic event might occur. PTSD may include feelings of isolation and emotional numbing.

Psychological vulnerabilities
Influences that our early experiences have on how we view the world.

Reinforced response
Following the process of operant conditioning, the strengthening of a response following either the delivery of a desired consequence (positive reinforcement) or escape from an aversive consequence.

SAD performance only
Social anxiety disorder which is limited to certain situations that the sufferer perceives as requiring some type of performance.

Social anxiety disorder (SAD)
A condition marked by acute fear of social situations which lead to worry and diminished day to day functioning.

Specific vulnerabilities
How our experiences lead us to focus and channel our anxiety.

Thought-action fusion
The tendency to overestimate the relationship between a thought and an action, such that one mistakenly believes a "bad" thought is the equivalent of a "bad" action.

References

APA. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Washington, D.C.: American Psychiatric Association.

Aikins, D. E., & Craske, M. G. (2001). Cognitive theories of generalized anxiety disorder. *Psychiatric Clinics of North America, 24*(1), 57-74, vi.

Antony, M. M., & Barlow, D. H. (2002). Specific phobias. In D. H. Barlow (Ed.), *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed.). New York, NY: Guilford Press.

Arrindell, W. A., Eisemann, M., Richter, J., Oei, T. P., Caballo, V. E., van der Ende, J., . . . Cultural Clinical Psychology Study, Group. (2003). Phobic anxiety in 11 nations. Part I: Dimensional constancy of the five-factor model. *Behaviour Research and Therapy, 41*(4), 461-479.

Barlow, D. H. (2002). *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed.). New York: Guilford Press.

Barlow, D. H., & Craske, M. G. (2007). *Mastery of your anxiety and panic* (4th ed.). New York, NY: Oxford University Press.

Barlow, D. H., & Liebowitz, M. R. (1995). Specific and social phobias. In H. I. Kaplan & B. J. Sadock (Eds.), *Comprehensive textbook of psychiatry: VI* (pp. 1204-1217). Baltimore, MD: Williams & Wilkins.

Barlow, D. H., Allen, L.B., & Basden, S. (2007). Pscyhological treatments for panic disorders, phobias, and generalized anxiety disorder. In P.E. Nathan & J.M. Gorman (Eds.), *A guide to treatments that work* (3rd ed.). New York, NY: Oxford University Press.

Barlow, D. H., Ellard, K. K., Fairholme, C. P., Farchione, T. J., Boisseau, C. L., Allen, L. B., & Ehrenreich-May, J. (2011). *Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders (Workbook)*. New York, NY: Oxford University Press.

Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2000). Cognitive-behavioral therapy, imipramine, or their combination for panic disorder: A randomized controlled trial. *Journal of the American Medical Association*, 283(19), 2529-2536.

Bogels, S. M., Alden, L., Beidel, D. C., Clark, L. A., Pine, D. S., Stein, M. B., & Voncken, M. (2010). Social anxiety disorder: questions and answers for the DSM-V. *Depression and Anxiety, 27*(2), 168-189. doi: 10.1002/da.20670

Borkovec, T. D., & Hu, S. (1990). The effect of worry on cardiovascular response to phobic imagery. *Behaviour Research and Therapy, 28*(1), 69-73.

Borkovec, T. D., Alcaine, O.M., & Behar, E. (2004). Avoidance theory of worry and generalized

anxiety disorder. In R.G. Heimberg, Turk C.L. & D.S. Mennin (Eds.), *Generalized Anxiety Disorder: Advances in research and practice* (pp. 77-108). New York, NY: Guilford Press.

Borkovec, T. D., Hazlett-Stevens, H., & Diaz, M.L. (1999). The role of positive beliefs about worry in generalized anxiety disorder and its treatment. *Clinical Psychology and Pscyhotherapy, 6*, 69-73.

Boyer, P., & Liénard, P. (2008). Ritual behavior in obsessive and normal individuals: Moderating anxiety and reorganizing the flow of action. *Current Directions in Psychological Science, 17* (4), 291-294.

Bradley, B. P., Mogg, K., White, J., Groom, C., & de Bono, J. (1999). Attentional bias for emotional faces in generalized anxiety disorder. *British Journal of Clinical Psychology, 38 (Pt 3)*, 267-278.

Brown, T.A., White, K.S., & Barlow, D.H. (2005). A psychometric reanalysis of the Albany Panic and Phobia Questionnaire. *Behaviour Research and Therapy, 43*, 337-355.

Bruch, M. A., & Heimberg, R. G. (1994). Differences in perceptions of parental and personal characteristics between generalized and non-generalized social phobics. *Journal of Anxiety Disorders, 8*, 155-168.

Cannon, W.B. (1929). *Bodily changes in pain, hunger, fear and rage*. Oxford, UK: Appleton.

Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: the role of control in the early environment. *Psychological Bulletin, 124*(1), 3-21.

Clark, D. M. (1996). Panic disorder: From theory to therapy. In P. Salkovskis (Ed.), *Fronteirs of cognitive therapy*(pp. 318-344). New York, NY: Guilford Press.

Clark, D. M. (1986). A cognitive approach to panic. *Behaviour Research and Therapy, 24*(4), 461-470.

Craske, M. G., & Barlow, D. H. (1988). A review of the relationship between panic and avoidance. *Clinical Pscyhology Review, 8*, 667-685.

Craske, M. G., & Barlow, D.H. (2008). *Panic disorder and agoraphobia*. New York, NY: Guilford Press.

Craske, M. G., Antony, M. M., & Barlow, D. H. (2006). *Mastering your fears and phobias: Therapist guide*. New York, NY: Oxford University Press.

Drabant, E. M., Ramel, W., Edge, M. D., Hyde, L. W., Kuo, J. R., Goldin, P. R., . . . Gross, J. J. (2012). Neural mechanisms underlying 5-HTTLPR-related sensitivity to acute stress. *American Journal of Psychiatry, 169(4)*, 397-405. doi: 10.1176/appi.ajp.2011.10111699

Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (1998). Generalized anxiety disorder: a preliminary test of a conceptual model. *Behaviour Research and Therapy, 36*(2), 215-226.

Friedman, M. J. (2009). Phenomenology of postraumatic stress disorder and acute stress

disorder. In M. M. Anthony & M. B. Stein (Eds.), *Oxford Handbook of Anxiety and Related Disorders*. New York, NY: Oxford University Press.

Fullana, M. A., Mataix-Cols, D., Caspi, A., Harrington, H., Grisham, J. R., Moffitt, T. E., & Poulton, R. (2009). Obsessions and compulsions in the community: prevalence, interference, help-seeking, developmental stability, and co-occurring psychiatric conditions. *American Journal of Psychiatry, 166(3)*, 329-336. doi: 10.1176/appi.ajp.2008.08071006

Gelernter, J., & Stein, M. B. (2009). Heritability and genetics of anxiety disorders. In M.M. Antony & M.B. Stein (Eds.), *Oxford handbook of anxiety and related disorders*. New York, NY: Oxford University Press.

Gunnar, M. R., & Fisher, P. A. (2006). Bringing basic research on early experience and stress neurobiology to bear on preventive interventions for neglected and maltreated children. *Developmental Psychopathology, 18*(3), 651-677.

Heimberg, R. G., Liebowitz, M. R., Hope, D. A., Schneier, F. R., Holt, C. S., Welkowitz, L. A., . . . Klein, D. F. (1998). Cognitive behavioral group therapy vs phenelzine therapy for social phobia: 12-week outcome. *Archives of General Psychiatry, 55*(12), 1133-1141.

Hofmann, S. G., Alpers, G. W., & Pauli, P. (2009). Phenomenology of panic and phobic disorders. In M. M. Antony & M. B. Stein (Eds.), *Oxford handbook of anxiety and related disorders* (pp. 34-46). New York, NY: Oxford University Press.

Hofmann, S. G., Lehman, C. L., & Barlow, D. H. (1997). How specific are specific phobias? *Journal of Behavior Therapy and Experimental Psychiatry, 28*(3), 233-240.

Hollon, S. D., DeRubeis, R. J., Shelton, R. C., Amsterdam, J. D., Salomon, R. M., O'Reardon, J. P., . . . Gallop, R. (2005). Prevention of relapse following cognitive therapy vs medications in moderate to severe depression. *Archives of General Psychiatry, 62*(4), 417-422. doi: 10.1001/archpsyc.62.4.417

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 593-602. doi: 10.1001/archpsyc.62.6.593

Kessler, R. C., Chiu, W. T., Demler, O., Merikangas, K. R., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 617-627. doi: 10.1001/archpsyc.62.6.617

Kessler, R. C., Chiu, W. T., Jin, R., Ruscio, A. M., Shear, K., & Walters, E. E. (2006). The epidemiology of panic attacks, panic disorder, and agoraphobia in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 63*(4), 415-424. doi: 10.1001/archpsyc.63.4.415

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress

disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*(12), 1048-1060.

Lieb, R., Wittchen, H. U., Hofler, M., Fuetsch, M., Stein, M. B., & Merikangas, K. R. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring: a prospective-longitudinal community study. *Archives of General Psychiatry, 57*(9), 859-866.

McCabe, R. E., Antony, M. M., Summerfeldt, L. J., Liss, A., & Swinson, R. P. (2003). Preliminary examination of the relationship between anxiety disorders in adults and self-reported history of teasing or bullying experiences. *Cognitive Behavior Therapy, 32*(4), 187-193. doi: 10.1080/16506070310005051

Myers, J. K., Weissman, M. M., Tischler, C. E., Holzer, C. E., Orvaschel, H., Anthony, J. C., . . . Stoltzman, R. (1984). Six-month prevalence of psychiatric disorders in three communities. *Archives of General Psychiatry, 41*, 959-967.

Ost, L. G. (1992). Blood and injection phobia: background and cognitive, physiological, and behavioral variables. *Journal of Abnormal Psychology, 101*(1), 68-74.

Otto, M. W., Tolin, D. F., Simon, N. M., Pearlson, G. D., Basden, S., Meunier, S. A., . . . Pollack, M. H. (2010). Efficacy of d-cycloserine for enhancing response to cognitive-behavior therapy for panic disorder. *Biological Psychiatry, 67*(4), 365-370. doi: 10.1016/j.biopsych.2009.07.036

Page, A. C., & Martin, N. G. (1998). Testing a genetic structure of blood-injury-injection fears. American *Journal of Medical Genetics, 81*(5), 377-384.

Rapee, R. M., & Melville, L. F. (1997). Recall of family factors in social phobia and panic disorder: comparison of mother and offspring reports. *Depress Anxiety, 5*(1), 7-11.

Schneier, F. R., Leibowitz, M. R., Beidel, D. C., J., Fyer A., George, M. S., Heimberg, R. G., . . . Versiani, M. (1996). Social Phobia. In T. A. Widiger, A. J. Frances, H. A. Pincus, R. Ross, M. B. First & W. W. Davis (Eds.), *DSM-IV sourcebook* (Vol. 2, pp. 507-548). Washington, D.C.: American Psychiatric Association.

Shear, M. K., Brown, T. A., Barlow, D. H., Money, R., Sholomskas, D. E., Woods, S. W., . . . Papp, L. A. (1997). Multicenter collaborative panic disorder severity scale. *American Journal of Psychiatry, 154*(11), 1571-1575.

Smoller, J. W., Block, S. R., & Young, M. M. (2009). Genetics of anxiety disorders: the complex road from DSM to DNA. *Depression and Anxiety, 26*(11), 965-975. doi: 10.1002/da.20623

Suárez, L, Bennett, S., Goldstein, C., & Barlow, D.H. (2009). Understanding anxiety disorders from a "triple vulnerabilities" framework. In M.M. Antony & M.B. Stein (Eds.), *Oxford Handbook of anxiety and related disorders* (pp. 153-172). New York, NY: Oxford University Press.

Wells, A. (2002). GAD, metacognition, and mindfulness: An information processing analysis.

Clinical *Psychology Science and Practice, 9*, 95-100.

18
History of Mental Illness

Ingrid G. Farreras

This module is divided into three parts. The first is a brief introduction to various criteria we use to define or distinguish between normality and abnormality. The second, largest part is a history of mental illness from the Stone Age to the 20th century, with a special emphasis on the recurrence of three causal explanations for mental illness; supernatural, somatogenic, and psychogenic factors. This part briefly touches upon trephination, the Greek theory of hysteria within the context of the four bodily humors, witch hunts, asylums, moral treatment, mesmerism, catharsis, the mental hygiene movement, deinstitutionalization, community mental health services, and managed care. The third part concludes with a brief description of the issue of diagnosis.

Learning Objectives

- Identify what the criteria used to distinguish normality from abnormality are.

- Understand the difference among the three main etiological theories of mental illness.

- Describe specific beliefs or events in history that exemplify each of these etiological theories (e.g., hysteria, humorism, witch hunts, asylums, moral treatments).

- Explain the differences in treatment facilities for the mentally ill (e.g., mental hospitals, asylums, community mental health centers).

- Describe the features of the "moral treatment" approach used by Chiarughi, Pinel, and Tuke.

- Describe the reform efforts of Dix and Beers and the outcomes of their work.

- Describe Kräpelin's classification of mental illness and the current DSM system.

History of Mental Illness

References to mental illness can be found throughout history. The evolution of mental illness, however, has not been linear or progressive but rather cyclical. Whether a behavior is considered normal or abnormal depends on the context surrounding the behavior and thus changes as a function of a particular time and culture. In the past, uncommon behavior or behavior that deviated from the sociocultural norms and expectations of a specific culture and period has been used as a way to silence or control certain individuals or groups. As a result, a less **cultural relativist** view of abnormal behavior has focused instead on whether behavior poses a threat to oneself or others or causes so much pain and suffering that it interferes with one's work responsibilities or with one's relationships with family and friends.

Throughout history there have been three general theories of the **etiology** of mental illness: **supernatural**, **somatogenic**, and **psychogenic**. Supernatural theories attribute mental illness to possession by evil or demonic spirits, displeasure of gods, eclipses, planetary gravitation, curses, and sin. Somatogenic theories identify disturbances in physical functioning resulting from either illness, genetic inheritance, or brain damage or imbalance. Psychogenic theories focus on traumatic or stressful experiences, **maladaptive** learned associations and cognitions, or distorted perceptions. Etiological theories of mental illness determine the care and treatment mentally ill individuals receive. As we will see below, an individual believed to be possessed by the devil will be viewed

Engravings from 1525 showing trephination. It was believed that drilling holes in the skull could cure mental disorders. [Image: Peter Treveris, CC0 Public Domain, https://goo.gl/m25gce]

and treated differently from an individual believed to be suffering from an excess of yellow bile. Their treatments will also differ, from exorcism to blood-letting. The theories, however, remain the same. They coexist as well as recycle over time.

Trephination is an example of the earliest supernatural explanation for mental illness. Examination of prehistoric skulls and cave art from as early as 6500 BC has identified surgical drilling of holes in skulls to treat head injuries and epilepsy as well as to allow evil spirits

trapped within the skull to be released (Restak, 2000). Around 2700 BC, Chinese medicine's concept of complementary positive and negative bodily forces ("yin and yang") attributed mental (and physical) illness to an imbalance between these forces. As such, a harmonious life that allowed for the proper balance of yin and yang and movement of vital air was essential (Tseng, 1973).

Mesopotamian and Egyptian papyri from 1900 BC describe women suffering from mental illness resulting from a wandering uterus (later named **hysteria** by the Greeks): The uterus could become dislodged and attached to parts of the body like the liver or chest cavity, preventing their proper functioning or producing varied and sometimes painful symptoms. As a result, the Egyptians, and later the Greeks, also employed a somatogenic treatment of strong smelling substances to guide the uterus back to its proper location (pleasant odors to lure and unpleasant ones to dispel).

Throughout classical antiquity we see a return to supernatural theories of demonic possession or godly displeasure to account for abnormal behavior that was beyond the person's control. Temple attendance with religious healing ceremonies and incantations to the gods were employed to assist in the healing process. Hebrews saw madness as punishment from God, so treatment consisted of confessing sins and repenting. Physicians were also believed to be able to comfort and cure madness, however.

Greek physicians rejected supernatural explanations of mental disorders. It was around 400 BC that Hippocrates (460–370 BC) attempted to separate superstition and religion from medicine by systematizing the belief that a deficiency in or especially an excess of one of the four essential bodily fluids (i.e., humors)—blood, yellow bile, black bile, and phlegm—was responsible for physical and mental illness. For example, someone who was too temperamental suffered from too much blood and thus blood-letting would be the necessary treatment. Hippocrates classified mental illness into one of four categories—epilepsy, mania, melancholia, and brain fever—and like other prominent physicians and philosophers of his time, he did not believe mental illness was shameful or that mentally ill individuals should be held accountable for their behavior. Mentally ill individuals were cared for at home by family members and the state shared no responsibility for their care. **Humorism** remained a recurrent somatogenic theory up until the 19th century.

While Greek physician Galen (AD 130–201) rejected the notion of a uterus having an **animistic soul**, he agreed with the notion that an imbalance of the four bodily fluids could cause mental illness. He also opened the door for psychogenic explanations for mental illness, however, by allowing for the experience of psychological stress as a potential cause of abnormality. Galen's psychogenic theories were ignored for centuries, however, as physicians attributed mental
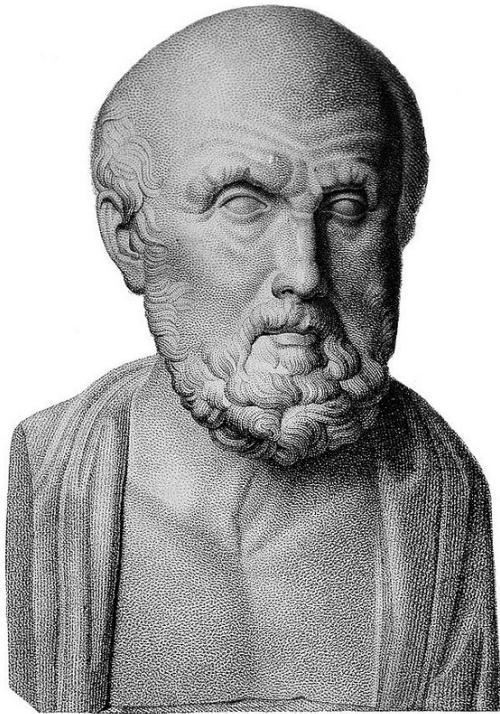
Many of Hippocrates' medical theories are no longer practiced today. However, he pioneered medicine as an empirical practice and came up with the "Hippocratic oath," which all doctors must swear to before joining the profession (i.e., the promise to never intentionally harm a patient). [Image: Wellcome Images, https://goo.gl/dX21yj, CC BY 4.0, https://goo.gl/FJIuOM]

illness to physical causes throughout most of the millennium.

By the late Middle Ages, economic and political turmoil threatened the power of the Roman Catholic church. Between the 11th and 15th centuries, supernatural theories of mental disorders again dominated Europe, fueled by natural disasters like plagues and famines that lay people interpreted as brought about by the devil. Superstition, astrology, and alchemy took hold, and common treatments included prayer rites, relic touching, confessions, and atonement. Beginning in the 13th century the mentally ill, especially women, began to be persecuted as witches who were possessed. At the height of the witch hunts during the 15th through 17th centuries, with the Protestant Reformation having plunged Europe into religious strife, two Dominican monks wrote the *Malleus Maleficarum* (1486) as the ultimate manual to guide witch hunts. Johann Weyer and Reginald Scot tried to convince people in the mid- to late-16th century that accused witches were actually women with mental illnesses and that mental illness was not due to demonic possession but to faulty metabolism and disease, but the Church's Inquisition banned both of their writings. Witch-hunting did not decline until the 17th and 18th centuries, after more than 100,000 presumed witches had been burned at the stake (Schoeneman, 1977; Zilboorg & Henry, 1941).

Modern treatments of mental illness are most associated with the establishment of hospitals and **asylums** beginning in the 16th century. Such institutions' mission was to house and confine the mentally ill, the poor, the homeless, the unemployed, and the criminal. War and economic depression produced vast numbers of undesirables and these were separated from society and sent to these institutions. Two of the most well-known institutions, St. Mary of Bethlehem in London, known as Bedlam, and the Hôpital Général of Paris—which included La Salpêtrière, La Pitié, and La Bicêtre—began housing mentally ill patients in the mid-16th and 17th centuries. As confinement laws focused on protecting the public *from* the mentally ill, governments became responsible for housing and feeding undesirables in exchange for

their personal liberty. Most inmates were institutionalized against their will, lived in filth and chained to walls, and were commonly exhibited to the public for a fee. Mental illness was nonetheless viewed somatogenically, so treatments were similar to those for physical illnesses: purges, bleedings, and emetics.

While inhumane by today's standards, the view of insanity at the time likened the mentally ill to animals (i.e., animalism) who did not have the capacity to reason, could not control themselves, were capable of violence without provocation, did not have the same physical sensitivity to pain or temperature, and could live in miserable conditions without complaint. As such, instilling fear was believed to be the best way to restore a disordered mind to reason.

By the 18th century, protests rose over the conditions under which the mentally ill lived, and the 18th and 19th centuries saw the growth of a more humanitarian view of mental illness. In 1785 Italian physician Vincenzo Chiarughi (1759–1820) removed the chains of patients at his St. Boniface hospital in Florence, Italy, and encouraged good hygiene and recreational and occupational training. More well known, French physician Philippe Pinel (1745–1826) and former patient Jean-Baptise Pussin created a "traitement moral" at La Bicêtre and the Salpêtrière in 1793 and 1795 that also included unshackling patients, moving them to well-aired, well-lit rooms, and encouraging purposeful activity and freedom to move about the grounds (Micale, 1985).

In England, humanitarian reforms rose from religious concerns. William Tuke (1732–1822) urged the Yorkshire Society of (Quaker) Friends to establish the York Retreat in 1796, where patients were guests, not prisoners, and where the standard of care depended on dignity and courtesy as well as the therapeutic and moral value of physical work (Bell, 1980).

While America had asylums for the mentally ill—such as the Pennsylvania Hospital in Philadelphia and the Williamsburg Hospital, established in 1756 and 1773—the somatogenic theory of mental illness of the time—promoted especially by the father of America psychiatry, Benjamin Rush (1745–1813)—had led to treatments

Dorothea Dix worked to change the negative perceptions of people with mental illness and helped create institutions where they could receive compassionate care. [Image: State Archives of North Carolina, https://goo.gl/wRgGsi, no known copyright restrictions]

such as blood-letting, gyrators, and tranquilizer chairs. When Tuke's York Retreat became the model for half of the new private asylums established in the United States, however, psychogenic treatments such as compassionate care and physical labor became the hallmarks of the new American asylums, such as the Friends Asylum in Frankford, Pennsylvania, and the Bloomingdale Asylum in New York City, established in 1817 and 1821 (Grob, 1994).

Moral treatment had to be abandoned in America in the second half of the 19th century, however, when these asylums became overcrowded and custodial in nature and could no longer provide the space nor attention necessary. When retired school teacher Dorothea Dix discovered the negligence that resulted from such conditions, she advocated for the establishment of state hospitals. Between 1840 and 1880, she helped establish over 30 mental institutions in the United States and Canada (Viney & Zorich, 1982). By the late 19th century, moral treatment had given way to the mental hygiene movement, founded by former patient Clifford Beers with the publication of his 1908 memoir *A Mind That Found Itself*. Riding on Pasteur's breakthrough germ theory of the 1860s and 1870s and especially on the early 20th century discoveries of vaccines for cholera, syphilis, and typhus, the mental hygiene movement reverted to a somatogenic theory of mental illness.

European psychiatry in the late 18th century and throughout the 19th century, however, struggled between somatogenic and psychogenic explanations of mental illness, particularly hysteria, which caused physical symptoms such as blindness or paralysis with no apparent physiological explanation. Franz Anton Mesmer (1734–1815), influenced by contemporary discoveries in electricity, attributed hysterical symptoms to imbalances in a universal magnetic fluid found in individuals, rather than to a wandering uterus (Forrest, 1999). James Braid (1795–1860) shifted this belief in mesmerism to one in hypnosis, thereby proposing a psychogenic treatment for the removal of symptoms. At the time, famed Salpetriere Hospital neurologist Jean-Martin Charcot (1825–1893), and Ambroise Auguste Liébault (1823–1904) and Hyppolyte Bernheim (1840–1919) of the Nancy School in France, were engaged in a bitter etiological battle over hysteria, with Charcot maintaining that the hypnotic suggestibility underlying hysteria was a neurological condition while Liébault and Bernheim believed it to be a general trait that varied in the population. Josef Breuer (1842–1925) and Sigmund Freud (1856–1939) would resolve this dispute in favor of a psychogenic explanation for mental illness by treating hysteria through hypnosis, which eventually led to the cathartic method that became the precursor for psychoanalysis during the first half of the 20th century.

Psychoanalysis was the dominant psychogenic treatment for mental illness during the first half of the 20th century, providing the launching pad for the more than 400 different schools of psychotherapy found today (Magnavita, 2006). Most of these schools cluster around broader behavioral, cognitive, cognitive-behavioral, psychodynamic, and client-centered

approaches to psychotherapy applied in individual, marital, family, or group formats. Negligible differences have been found among all these approaches, however; their efficacy in treating mental illness is due to factors shared among all of the approaches (not particular elements specific to each approach): the therapist-patient alliance, the therapist's allegiance to the therapy, therapist competence, and placebo effects (Luborsky et al., 2002; Messer & Wampold, 2002).

In contrast, the leading somatogenic treatment for mental illness can be found in the establishment of the first psychotropic medications in the mid-20th century. Restraints, electro-convulsive shock therapy, and lobotomies continued to be employed in American state institutions until the 1970s, but they quickly made way for a burgeoning pharmaceutical industry that has viewed and treated mental illness as a chemical imbalance in the brain.

Both etiological theories coexist today in what the psychological discipline holds as the **biopsychosocial model** of explaining human behavior. While individuals may be born with a genetic predisposition for a certain psychological disorder, certain psychological stressors need to be present for them to develop the disorder. Sociocultural factors such as sociopolitical or economic unrest, poor living conditions, or problematic interpersonal relationships are also viewed as contributing factors. However much we want to believe that we are above the treatments described above, or that the present is always the most enlightened time, let us not forget that our thinking today continues to reflect the same underlying somatogenic and psychogenic theories of mental illness discussed throughout this cursory 9,000-year history.

Diagnosis of Mental Illness

Progress in the treatment of mental illness necessarily implies improvements in the diagnosis of mental illness. A standardized diagnostic classification system with agreed-upon definitions of psychological disorders creates a shared language among mental-health providers and aids in clinical research. While diagnoses were recognized as far

Up until the 1970's, homosexuality was included in the DSM as a psychological disorder. Thankfully, society and clinical understanding changed to recognize it didn't belong. [Image: Rene Walter, https://goo.gl/CcJAA1, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

back as the Greeks, it was not until 1883 that German psychiatrist Emil Kräpelin (1856–1926) published a comprehensive system of psychological disorders that centered around a pattern of symptoms (i.e., **syndrome**) suggestive of an underlying physiological cause. Other clinicians also suggested popular classification systems but the need for a single, shared system paved the way for the American Psychiatric Association's 1952 publication of the first *Diagnostic and Statistical Manual* (DSM).

The DSM has undergone various revisions (in 1968, 1980, 1987, 1994, 2000, 2013), and it is the 1980 DSM-III version that began a multiaxial classification system that took into account the entire individual rather than just the specific problem behavior. Axes I and II contain the clinical diagnoses, including intellectual disability and personality disorders. Axes III and IV list any relevant medical conditions or psychosocial or environmental stressors, respectively. Axis V provides a global assessment of the individual's level of functioning. The most recent version -- the DSM-5-- has combined the first three axes and removed the last two. These revisions reflect an attempt to help clinicians streamline diagnosis and work better with other diagnostic systems such as health diagnoses outlined by the World Health Organization.

While the DSM has provided a necessary shared language for clinicians, aided in clinical research, and allowed clinicians to be reimbursed by insurance companies for their services, it is not without criticism. The DSM is based on clinical and research findings from Western culture, primarily the United States. It is also a medicalized categorical classification system that assumes disordered behavior does not differ in degree but in kind, as opposed to a dimensional classification system that would plot disordered behavior along a continuum. Finally, the number of diagnosable disorders has tripled since it was first published in 1952, so that almost half of Americans will have a diagnosable disorder in their lifetime, contributing to the continued concern of labeling and stigmatizing mentally ill individuals. These concerns appear to be relevant even in the DSM-5 version that came out in May of 2013.

Outside Resources

Video: An introduction to and overview of psychology, from its origins in the nineteenth century to current study of the brain's biochemistry.
http://www.learner.org/series/discoveringpsychology/01/e01expand.html

Video: The BBC provides an overview of ancient Greek approaches to health and medicine.
https://www.tes.com/teaching-resource/ancient-greek-approaches-to-health-and-medicine-6176019

Web: Images from the History of Medicine. Search \\\"mental illness\\\"
http://ihm.nlm.nih.gov/luna/servlet/view/all

Web: Science Museum Brought to Life
http://www.sciencemuseum.org.uk/broughttolife/themes/menalhealthandillness.aspx

Web: The Social Psychology Network provides a number of links and resources.
https://www.socialpsychology.org/history.htm

Web: The Wellcome Library. Search \\\"mental illness\\\".
http://wellcomelibrary.org/

Web: UCL Department of Science and Technology Studies
https://www.ucl.ac.uk/sts/

Web: US National Library of Medicine
http://vsearch.nlm.nih.gov/vivisimo/cgi-bin/query-meta?query=mental+illness&v:project=nlm-main-website

Discussion Questions

1. What does it mean to say that someone is mentally ill? What criteria are usually considered to determine whether someone is mentally ill?

2. Describe the difference between supernatural, somatogenic, and psychogenic theories of mental illness and how subscribing to a particular etiological theory determines the type of treatment used.

3. How did the Greeks describe hysteria and what treatment did they prescribe?

4. Describe humorism and how it explained mental illness.

5. Describe how the witch hunts came about and their relationship to mental illness.

6. Describe the development of treatment facilities for the mentally insane, from asylums to community mental health centers.

7. Describe the humane treatment of the mentally ill brought about by Chiarughi, Pinel, and Tuke in the late 18th and early 19th centuries and how it differed from the care provided in the centuries preceding it.

8. Describe William Tuke's treatment of the mentally ill at the York Retreat within the context of the Quaker Society of Friends. What influence did Tuke's treatment have in other parts of the world?

9. What are the 20th-century treatments resulting from the psychogenic and somatogenic theories of mental illness?

10. Describe why a classification system is important and how the leading classification system used in the United States works. Describe some concerns with regard to this system.

Vocabulary

Animism
The belief that everyone and everything had a "soul" and that mental illness was due to animistic causes, for example, evil spirits controlling an individual and his/her behavior.

Asylum
A place of refuge or safety established to confine and care for the mentally ill; forerunners of the mental hospital or psychiatric facility.

Biopsychosocial model
A model in which the interaction of biological, psychological, and sociocultural factors is seen as influencing the development of the individual.

Cathartic method
A therapeutic procedure introduced by Breuer and developed further by Freud in the late 19th century whereby a patient gains insight and emotional relief from recalling and reliving traumatic events.

Cultural relativism
The idea that cultural norms and values of a society can only be understood on their own terms or in their own context.

Etiology
The causal description of all of the factors that contribute to the development of a disorder or illness.

Humorism (or humoralism)
A belief held by ancient Greek and Roman physicians (and until the 19th century) that an excess or deficiency in any of the four bodily fluids, or humors—blood, black bile, yellow bile, and phlegm—directly affected their health and temperament.

Hysteria
Term used by the ancient Greeks and Egyptians to describe a disorder believed to be caused by a woman's uterus wandering throughout the body and interfering with other organs (today referred to as conversion disorder, in which psychological problems are expressed in physical form).

Maladaptive
Term referring to behaviors that cause people who have them physical or emotional harm, prevent them from functioning in daily life, and/or indicate that they have lost touch with reality and/or cannot control their thoughts and behavior (also called dysfunctional).

Mesmerism
Derived from Franz Anton Mesmer in the late 18th century, an early version of hypnotism in which Mesmer claimed that hysterical symptoms could be treated through animal magnetism emanating from Mesmer's body and permeating the universe (and later through magnets); later explained in terms of high suggestibility in individuals.

Psychogenesis
Developing from psychological origins.

Somatogenesis
Developing from physical/bodily origins.

Supernatural
Developing from origins beyond the visible observable universe.

Syndrome
Involving a particular group of signs and symptoms.

"Traitement moral" (moral treatment)
A therapeutic regimen of improved nutrition, living conditions, and rewards for productive behavior that has been attributed to Philippe Pinel during the French Revolution, when he released mentally ill patients from their restraints and treated them with compassion and dignity rather than with contempt and denigration.

Trephination
The drilling of a hole in the skull, presumably as a way of treating psychological disorders.

References

Bell, L. V. (1980). *Treating the mentally ill: From colonial times to the present*. New York: Praeger.

Forrest, D. (1999). *Hypnotism: A history*. New York: Penguin.

Grob, G. N. (1994). *The mad among us: A history of the care of America's mentally ill*. New York: Free Press.

Luborsky, L., Rosenthal, R., Diguer, L., Andrusyna, T. P., Berman, J. S., Levitt, J. T., . . . Krause, E. D. (2002). The dodo bird verdict is alive and well—mostly. *Clinical Psychology: Science and Practice, 9*, 2–12.

Messer, S. B., & Wampold, B. E. (2002). Let's face facts: Common factors are more potent than specific therapy ingredients. *Clinical Psychology: Science and Practice, 9*(1), 21–25.

Micale, M. S. (1985). The Salpêtrière in the age of Charcot: An institutional perspective on medical history in the late nineteenth century. *Journal of Contemporary History, 20*, 703–731.

Restak, R. (2000). *Mysteries of the mind*. Washington, DC: National Geographic Society.

Schoeneman, T. J. (1977). The role of mental illness in the European witch hunts of the sixteenth and seventeenth centuries: An assessment. *Journal of the History of the Behavioral Sciences, 13*(4), 337–351.

Tseng, W. (1973). The development of psychiatric concepts in traditional Chinese medicine. *Archives of General Psychiatry, 29*, 569–575.

Viney, W., & Zorich, S. (1982). Contributions to the history of psychology: XXIX. Dorothea Dix and the history of psychology. *Psychological Reports, 50*, 211–218.

Zilboorg, G., & Henry, G. W. (1941). *A history of medical psychology*. New York: W. W. Norton.

19
Dissociative Disorders

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In psychopathology, dissociation happens when thoughts, feelings, and experiences of our consciousness and memory do not collaborate well with each other. This module provides an overview of dissociative disorders, including the definitions of dissociation, its origins and competing theories, and their relation to traumatic experiences and sleep problems.

Learning Objectives

- Define the basic terminology and historical origins of dissociative symptoms and dissociative disorders.
- Describe the posttraumatic model of dissociation and the sleep-dissociation model, and the controversies and debate between these competing theories.
- What is the innovative angle of the sleep-dissociation model?
- How can the two models be combined into one conceptual scheme?

Introduction

Think about the last time you were daydreaming. Perhaps it was while you were driving or attending class. Some portion of your attention was on the activity at hand, but most of your conscious mind was wrapped up in fantasy. Now imagine that you could not control your daydreams. What if they intruded your waking **consciousness** unannounced, causing you to lose track of reality or experience the loss of time. Imagine how difficult it would be for you. This is similar to what people who suffer from dissociative disorders may experience. Of the

many disorders listed in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5) (American Psychiatric Association, 2013), dissociative disorders rank as among the most puzzling and controversial. Dissociative disorders encompass an array of symptoms ranging from memory loss (amnesia) for autobiographical events, to changes in identity and the experience of everyday reality (American Psychiatric Association, 2013).

Is it real?
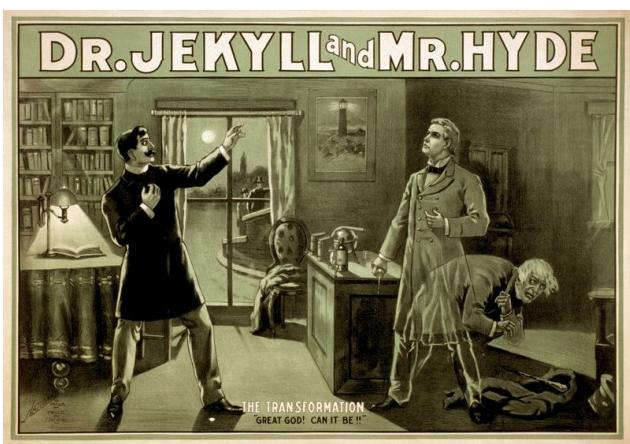
Dissociative disorders are often exaggerated when portrayed in television, books and movies; however, there is concrete evidence that people do suffer from these disorders. [Image: Library of Congress, https://goo.gl/BrTchp, CC BY-NC 3.0, https://goo.gl/osSgSv]

Let's start with a little history. Multiple personality disorder, or dissociative identity disorder—as it is known now—used to be a mere curiosity. This is a disorder in which people present with more than one personality. For example, at times they might act and identify as an adult while at other times they might identify and behave like a child. The disorder was rarely diagnosed until the 1980s. That's when multiple personality disorder became an official diagnosis in the DSM-III. From then on, the numbers of "multiples" increased rapidly. In the 1990s, there were hundreds of people diagnosed with multiple personality in every major city in the United States (Hacking, 1995). How could this "epidemic" be explained?

One possible explanation might be the media attention that was given to the disorder. It all started with the book *The Three Faces of Eve* (Thigpen & Cleckley, 1957). This book, and later the movie, was one of the first to speak of multiple personality disorder. However, it wasn't until years later, when the fictional "as told to" book of *Sybil* (Schreiber, 1973) became known worldwide, that the prototype of what it was like to be a "multiple personality" was born. Sybil tells the story of how a clinician—Cornelia Wilbur—unravels the different personalities of her patient Sybil during a long course of treatment (over 2,500 office hours!). She was one of the first to relate multiple personality to childhood sexual abuse. Probably, this relation between childhood abuse and dissociation has fueled the increase of numbers of multiples from that time on. It motivated therapists to actively seek for clues of childhood abuse in their dissociative patients. This suited well within the mindset of the 1980s, as childhood abuse was a sensitive issue then in psychology as well as in politics (Hacking, 1995).

From then on, many movies and books were made on the subject of multiple personality, and nowadays, we see patients with dissociative identity disorder as guests visiting the Oprah Winfrey show, as if they were our modern-day circus acts.

Defining dissociation

The DSM-5 defines **dissociation** as "a disruption and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control and behavior" (American Psychiatric Association, 2013, p. 291). A distinction is often made between dissociative *states* and dissociative *traits* (e.g., Bremner, 2010; Bremner & Brett, 1997). State dissociation is viewed as a transient symptom, which lasts for a few minutes or hours (e.g., dissociation during a traumatic event). Trait dissociation is viewed as an integral aspect of personality. Dissociative symptoms occur in patients but also in the **general population**, like you and me. Therefore, dissociation has commonly been conceptualized as ranging on a continuum, from nonsevere manifestations of daydreaming to more severe disturbances typical of dissociative disorders (Bernstein & Putnam, 1986). The dissociative disorders include:

1. Dissociative Amnesia (extensive forgetting typically associated with highly aversive events);

2. Dissociative Fugue (short-lived reversible amnesia for personal identity, involving unplanned travel or "bewildered wandering." Dissociative fugue is not viewed as a separate disorder but is a feature of some, but not all, cases of dissociative amnesia);

3. Depersonalization/Derealization Disorder (feeling as though one is an outside observer of one's body); and

4. Dissociative Identity Disorder (**DID**; experiencing two or more distinct identities that recurrently take control over one's behavior) (American Psychiatric Association, 2000).

Although the concept of dissociation lacks a generally accepted definition, the Structural Clinical Interview for DSM-IV Dissociative Disorders (**SCID-D**) (Steinberg, 2001) assesses five symptom clusters that encompass key features of the dissociative disorders. These clusters are also found in the DSM-5:

1. depersonalization,

2. derealization,

3. dissociative amnesia,

4. identity confusion, and

5. identity alteration.

Depersonalization refers to a "feeling of detachment or estrangement from one's self." Imagine that you are outside of your own body, looking at yourself from a distance as though you were looking at somebody else. Maybe you can also imagine what it would be like if you felt like a robot, deprived of all feelings. These are examples of depersonalization. Derealization is defined as "an alteration in the perception of one's surroundings so that a sense of reality of the external world is lost" (Steinberg, 2001, p. 101). Imagine that the world around you seems as if you are living in a movie, or looking through a fog. These are examples of derealization. Dissociative amnesia does not refer to permanent memory loss, similar to the erasure of a computer disk, but rather to the hypothetical disconnection of memories from conscious inspection (Steinberg, 2001). Thus, the memory is still there somewhere, but you cannot reach it. Identity confusion is defined by Steinberg as "… thoughts and feelings of uncertainty and conflict a person has related to his or her identity" (Steinberg, 2001, p. 101), whereas identity alteration describes the behavioral acting out of this uncertainty and conflict (Bernstein & Putnam, 1986).

Those experiencing depersonalization report "dreamlike feelings" and that their bodies, feelings, emotions, and behaviors are not their own. [Image: Janine, https://goo.gl/MDpyRG, CC BY-NC-ND 2.0, https://goo.gl/62XJAl]

Dissociative disorders are not as uncommon as you would expect. Several studies in a variety of patient groups show that dissociative disorders are prevalent in a 4%–29% range (Ross, Anderson, Fleischer, & Norton, 1991; Sar, Tutkun, Alyanak, Bakim, & Baral, 2000; Tutkun et al., 1998. For reviews see: Foote, Smolin, Kaplan, Legatt, & Lipschitz, 2006; Spiegel et al., 2011). Studies generally find a much lower prevalence in the general population, with rates in the order of 1%–3% (Lee, Kwok, Hunter, Richards, & David, 2010; Rauschenberger & Lynn, 1995; Sandberg & Lynn, 1992). Importantly, dissociative symptoms are not limited to the dissociative disorders. Certain diagnostic groups, notably patients with borderline personality disorder, posttraumatic stress disorder (PTSD), obsessive-compulsive disorder (Rufer, Fricke, Held, Cremer, & Hand, 2006), and schizophrenia (Allen & Coyne, 1995; Merckelbach, à Campo, Hardy, & Giesbrecht, 2005; Yu et al., 2010) also display heightened levels of dissociation.

Measuring dissociation

The Dissociative Experiences Scale (DES) (Bernstein & Putnam, 1986; Carlson & Putnam, 2000; Wright & Loftus, 1999) is the most widely used self-report measure of dissociation. A self-report measure is a type of **psychological test** in which a person completes a survey or **questionnaire** with or without the help of an investigator. This scale measures dissociation with items such as (a) "Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something, and they actually see themselves as if they were looking at another person" and (b) "Some people find that sometimes they are listening to someone talk, and they suddenly realize that they did not hear part or all of what was said."

The DES is suitable only as a screening tool. When somebody scores a high level of dissociation on this scale, this does not necessarily mean that he or she is suffering from a dissociative disorder. It does, however, give an indication to investigate the symptoms more extensively. This is usually done with a structured clinical interview, called the Structured Clinical Interview for DSM-IV Dissociative Disorders (Steinberg, 1994), which is performed by an experienced clinician. With the publication of the new DSM-5 there has been an updated version of this instrument.

Dissociation and Trauma

The most widely held perspective on dissociative symptoms is that they reflect a defensive response to highly aversive events, mostly trauma experiences during the childhood years (Bremner, 2010; Spiegel et al., 2011; Spitzer, Vogel, Barnow, Freyberger, & Grabe, 2007).

One prominent interpretation of the origins of dissociative disorders is that they are the direct result of exposure to traumatic experiences. We will refer to this interpretation as the posttraumatic model (PTM). According to the PTM, dissociative symptoms can best be understood as mental strategies to cope with or avoid the impact of highly aversive experiences (e.g., Spiegel et al., 2011). In this view, individuals rely on dissociation to escape from painful memories (Gershuny & Thayer, 1999). Once they have learned to use this defensive coping mechanism, it can become automatized and habitual, even emerging in response to minor stressors (Van der Hart & Horst, 1989). The idea that dissociation can serve a defensive function can be traced back to Pierre Janet (1899/1973), one of the first scholars to link dissociation to psychological trauma (Hacking, 1995).

The PTM casts the clinical observation that dissociative disorders are linked to a trauma history

in straightforward causal terms, that is, one *causes* the other (Gershuny & Thayer, 1999). For example, Vermetten and colleagues (Vermetten, Schmahl, Lindner, Loewenstein, & Bremner, 2006) found that the DID patients in their study all suffered from posttraumatic stress disorder and concluded that DID should be conceptualized as an extreme form of early-abuse–related posttraumatic stress disorder (Vermetten et al., 2006).

Causality and evidence

The empirical evidence that trauma *leadsto* dissociative symptoms is the subject of intense debate (Kihlstrom, 2005; Bremner, 2010; Giesbrecht, Lynn, Lilienfeld & Merckelbach, 2010). Three limitations of the PTM will be described below.

First, the majority of studies reporting links between self-reported trauma and dissociation are based on **cross-sectional designs**. This means that the data are collected at one point in time. When analyzing this type of data, one can only state whether scoring high on a particular questionnaire (for example, a trauma questionnaire) is indicative of also scoring high on another questionnaire (for example, the DES). This makes it difficult to state if one thing led to another, and therefore if the relation between the two is *causal*. Thus, the data that these designs yield do not allow for strong causal claims (Merckelbach & Muris, 2002).

Second, whether somebody has experienced a trauma is often established using a questionnaire that the person completes himself or herself. This is called a **self-report measure**. Herein lies the problem. Individuals suffering from dissociative symptoms typically have high **fantasy proneness**. This is a character trait to engage in extensive and vivid fantasizing. The tendency to fantasize a lot may increase the risk of exaggerating or understating self-reports of traumatic experiences (Merckelbach et al., 2005; Giesbrecht, Lynn, Lilienfeld, & Merckelbach, 2008).

Third, high dissociative individuals report more cognitive failures than low dissociative individuals. **Cognitive failures** are everyday slips and lapses, such as failing to notice signposts on the road, forgetting appointments, or bumping into people. This can be seen, in part, in the DSM-5 criteria for DID, in which people may have difficulty recalling everyday events as well as those that are traumatic. People who frequently make such slips and lapses often mistrust their own cognitive capacities. They also tend to overvalue the hints and cues provided by others (Merckelbach, Horselenberg, & Schmidt, 2002; Merckelbach, Muris, Rassin, & Horselenberg, 2000). This makes them vulnerable to suggestive information, which may distort self-reports, and thus limits conclusions that can be drawn from studies that rely solely on self-reports to investigate the trauma-dissociation link (Merckelbach & Jelicic, 2004).

Most important, however, is that the PTM does not tell us *how* trauma produces dissociative symptoms. Therefore, workers in the field have searched for other explanations. They proposed that due to their dreamlike character, dissociative symptoms such as derealization, depersonalization, and absorption are associated with sleep-related experiences. They further noted that sleep-related experiences can explain the relation between highly aversive events and dissociative symptoms (Giesbrecht et al., 2008; Watson, 2001). In the following paragraph, the relation between dissociation and sleep will be discussed.

Dissociation and Sleep

A little history

Those who have fallen asleep in class or on the bus have likely experienced those "micro-dreams" - that moment or two where reality kind of blends in with your dreams. For a long time, scientists thought dissociative disorders were simply this confusion of waking and dreaming states. [Image: kooklanekookla, https://goo.gl/Cn3xul, CC BY 2.0, https://goo.gl/BRvSA7]

Researchers (Watson, 2001) have proposed that dissociative symptoms, such as absorption, derealization, and depersonalization originate from sleep. This idea is not entirely new. In the 19th century, double consciousness (or *dédoublement*), the historical precursor of dissociative identity disorder (DID; formerly known as multiple personality disorder), was often described as "somnambulism," which refers to a state of sleepwalking. Patients suffering from this disorder were referred to as "somnambules" (Hacking, 1995). Many 19th-century scholars believed that these patients were switching between a "normal state" and a "somnambulistic state." Hughlings Jackson, a well-known English neurologist from this era, viewed dissociation as the uncoupling of normal consciousness, which would result in what he termed "the dreamy state" (Meares, 1999). Interestingly, a century later, Levitan (1967) hypothesized that "depersonalization is a compromise state between dreaming and waking" (p.157). Arlow (1966) observed that the dissociation between the "experiencing self" and the "observing self" serves as the basis of depersonalized states, emphasizing its occurrence, especially in dreams. Likewise, Franklin (1990) considered dreamlike thoughts,

the amnesia one usually has for dreams, and the lack of orientation of time, place, and person during dreams to be strikingly similar to the amnesia DID patients often report for their traumas. Related, Barrett (1994, 1995) described the similarity between dream characters and "alter personalities" in DID, with respect to cognitive and sensory abilities, movement, amnesia, and continuity with normal waking. The many similarities between dreaming states and dissociative symptoms are also a recurrent theme in the more recent clinical literature (e.g., Bob, 2004).

Sleep problems in patients with dissociative disorders

Anecdotal evidence supports the idea that sleep disruptions are linked to dissociation. For example, in patients with depersonalization, symptoms are worst when they are tired (Simeon & Abugel, 2006). Interestingly, among participants who report memories of childhood sexual abuse, experiences of sleep paralysis typically are accompanied by raised levels of dissociative symptoms (McNally & Clancy, 2005; Abrams, Mulligan, Carleton, & Asmundson, 2008).

Patients with mood disorders, anxiety disorders, schizophrenia, and borderline personality disorder—conditions with relatively high levels of dissociative symptoms—as a rule exhibit sleep abnormalities. Recent research points to fairly specific relationships between certain sleep complaints (e.g., insomnia, nightmares) and certain forms of psychopathology (e.g., depression, posttraumatic stress disorder) (Koffel & Watson, 2009).

Studying the relationship between dissociation and sleep

In the general population, both dissociative symptoms and sleep problems are highly prevalent. For example, 29 percent of American adults report sleep problems (National Sleep Foundation, 2005). This allows researchers to study the relationship between dissociation and sleep not only in patients but also in the general population. In a pioneering study, Watson (2001) showed that dissociative symptoms—measured by the DES—are linked to self-reports of vivid dreams, nightmares, recurrent dreams, and other unusual sleep phenomena. This relationship has been studied extensively ever since, leading to three important statements.

First, Watson's (2001) basic findings have been reproduced time and again. This means that the same results (namely that dissociation and sleep problems are related) have been found in lots of different studies, using different groups, and different materials. All lead to the conclusion that unusual sleep experiences and dissociative symptoms are linked.

Second, the connection between sleep and dissociation is specific. It seems that unusual sleep

phenomena that are difficult to control, including nightmares and waking dreams, are related to dissociative symptoms, but lucid dreaming—dreams that are controllable—are only weakly related to dissociative symptoms. For example, dream recall frequency was related to dissociation (Suszek & Kopera, 2005). Individuals who reported three or more nightmares over a three-week period showed higher levels of dissociation compared to individuals reporting two nightmares or less (Levin & Fireman, 2002), and a relation was found between dream intensity and dissociation (Yu et al., 2010).

Third, the sleep-dissociation link is apparent not only in general population groups—people such as you and me—but also in patient groups. Accordingly, one group of researchers reported nightmare disorder in 17 out of 30 DID patients (Agargun et al., 2003). They also found a 27.5% prevalence of nocturnal dissociative episodes in patients with dissociative disorders (Agargun et al., 2001). Another study investigated a group of borderline personality disorder patients and found that 49% of them suffered from nightmare disorder. Moreover, the patients with nightmare disorder displayed higher levels of dissociation than patients not suffering from nightmare disorder (Semiz, Basoglu, Ebrinc, & Cetin, 2008). Additionally, Ross (2011) found that patients suffering from DID reported higher rates of sleepwalking compared to a group of psychiatric outpatients and a sample from the general population.

To sum up, there seems to be a strong relationship between dissociative symptoms and unusual sleep experiences that is evident in a range of phenomena, including waking dreams, nightmares, and sleepwalking.

Inducing and reducing sleep problems

Sleep problems can be induced in healthy participants by keeping them awake for a long duration of time. This is called sleep deprivation. If dissociative symptoms are fueled by a labile sleep-wake cycle, then sleep loss would be expected to intensify dissociative symptoms. Some evidence that this might work was already found in 2001, when soldiers who underwent a U.S. Army survival training, which included sleep deprivation, showed increases in dissociative symptoms (Morgan et al., 2001). Other researchers conducted a study that tracked 25 healthy volunteers during one day and one night of sleep loss. They found that dissociative symptoms increased substantially after one night of sleep loss (Giesbrecht, Smeets, Leppink, Jelicic, & Merckelbach, 2007).

To further examine the causal link between dissociative experiences and sleep, we (van der Kloet, Giesbrecht, Lynn, Merckelbach, & de Zutter, 2011) investigated the relationship between unusual sleep experiences and dissociation in a patient group at a private clinic. They

completed questionnaires upon arrival at the clinic and again when they departed eight weeks later. During their stay, they followed a strict program designed to improve sleep problems. And it worked! In most patients, sleep quality was improved after eight weeks. We found a robust link between sleep experiences and dissociative symptoms and determined that sleep *normalization* was accompanied by a *reduction* in dissociative symptoms.

An exciting interpretation of the link between dissociative symptoms and unusual sleep phenomena (see also, Watson, 2001) may be this: A disturbed sleep–wake cycle may lead to dissociative symptoms. However, we should be cautious. Although studies support a causal arrow leading from sleep disruption to dissociative symptoms, the associations between sleep and dissociation may be more complex. For example, causal links may be bi-directional, such that dissociative symptoms may lead to sleep problems and vice versa, and other psychopathology may interfere in the link between sleep and dissociative symptoms (van der Kloet et al., 2011).

Implications and Conclusions

No longer are dissociative disorders untreatable illnesses. With the new methods developed by researchers, there is hope for curing or at least improving the lives of those with this debilitating disorder. [Image: CC0 Public Domain, https://goo.gl/m25gce]

The sleep-dissociation model offers a fresh and exciting perspective on dissociative symptoms. This model may seem remote from the PTM. However, both models can be integrated in a single conceptual scheme in which traumatic childhood experiences may lead to disturbed sleep patterns, which may be the final common pathway to dissociative symptoms. Accordingly, the sleep-dissociation model may explain both: (a) how traumatic experiences disrupt the sleep–wake cycle and increase vulnerability to dissociative symptoms, and (b) why dissociation, trauma, fantasy proneness, and cognitive failures overlap.

Future studies can also discern what characteristic sleep disruptions in the sleep–wake cycle are most reliably related to dissociative disorders, and then establish training programs, including medication regimens, to address these problems. This would constitute an entirely novel and exciting approach to the treatment of dissociative symptoms.

In closing, the sleep-dissociation model can serve as a framework for studies that address a wide range of fascinating questions about dissociative symptoms and disorders. We now have good reason to be confident that research on sleep and dissociative symptoms will inform psychiatry, clinical science, and psychotherapeutic practice in meaningful ways in the years to come.

Outside Resources

Article: Extreme Dissociative Fugue: A life, Interrupted - A recent case of extreme dissociative fugue. The article is particularly powerful as it relates the story of a seemingly typical person, a young teacher, who suddenly experiences a dissociative fugue.
http://www.nytimes.com/2009/03/01/nyregion/thecity/01miss.html?_r=0

Book: Schreiber, F. R. (1973). Sybil. Chicago: Regnery.

Film: Debate Persists Over Diagnosing Mental Health Disorders, Long After 'Sybil'. This short film would be useful to provide students with perspectives on the debate over diagnoses. It could be used to introduce the debate and provide students with evidence to argue for or against the diagnosis.
http://www.nytimes.com/2014/11/24/us/debate-persists-over-diagnosing-mental-health-disorders-long-after-sybil.html

Structured Clinical Interview for DSM-5 (SCID-5)
https://www.appi.org/products/structured-clinical-interview-for-dsm-5-scid-5

Video: Depiction of the controversy regarding the existence of DID and show you some debate between clinicians and researchers on the topics of brain imaging, recovered memories, and false memories. False memory syndrome.
http://www.youtube.com/watch?v=K4NZ7_Hn-rI

Video: Patient Switching on Command and in Brain Scanner - This eight-minute video depicts the controversy regarding the existence of DID and relates some of the debate between clinicians and researchers on the topics of brain imaging, recovered memories, and false memories.
http://www.youtube.com/watch?v=zhM0xp5vXqY

Discussion Questions

1. Why are dissociation and trauma related to each other?

2. How is dissociation related to sleep problems?

3. Are dissociative symptoms induced or merely increased by sleep disturbances?

4. Do you have any ideas regarding treatment possibilities for dissociative disorders?

5. Does DID really exist?

Vocabulary

Amnesia
The loss of memory.

Anxiety disorder
A group of diagnoses in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) classification system where anxiety is central to the person's dysfunctioning. Typical symptoms include excessive rumination, worrying, uneasiness, apprehension, and fear about future uncertainties either based on real or imagined events. These symptoms may affect both physical and psychological health. The anxiety disorders are subdivided into panic disorder, specific phobia, social phobia, posttraumatic stress disorder, obsessive-compulsive disorder, and generalized anxiety disorder.

Borderline Personality Disorder
This personality disorder is defined by a chronic pattern of instability. This instability manifests itself in interpersonal relationships, mood, self-image, and behavior that can interfere with social functioning or work. It may also cause grave emotional distress.

Cognitive failures
Every day slips and lapses, also called absentmindedness.

Consciousness
The quality or state of being aware of an external object or something within oneself. It has been defined as the ability to experience or to feel, wakefulness, having a sense of selfhood, and the executive control system of the mind.

Cross-sectional design
Research method that involves observation of all of a population, or a representative subset, at one specific point in time.

Defensive coping mechanism
An unconscious process, which protects an individual from unacceptable or painful ideas, impulses, or memories.

DES
Dissociative Experiences Scale.

DID

Dissociative identity disorder, formerly known as multiple personality disorder, is at the far end of the dissociative disorder spectrum. It is characterized by at least two distinct, and dissociated personality states. These personality states – or 'alters' - alternately control a person's behavior. The sufferer therefore experiences significant memory impairment for important information not explained by ordinary forgetfulness.

Dissociation

A disruption in the usually integrated function of consciousness, memory, identity, or perception of the environment.

Fantasy proneness

The tendency to extensive fantasizing or daydreaming.

General population

A sample of people representative of the average individual in our society.

Insomnia

A sleep disorder in which there is an inability to fall asleep or to stay asleep as long as desired. Symptoms also include waking up too early, experience many awakenings during the night, and not feeling rested during the day.

Lucid dreams

Any dream in which one is aware that one is dreaming.

Mood disorder

A group of diagnoses in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) classification system where a disturbance in the person's mood is the primary dysfunction. Mood disorders include major depressive disorder, bipolar disorder, dysthymic and cyclothymic disorder.

Nightmares

An unpleasant dream that can cause a strong negative emotional response from the mind, typically fear or horror, but also despair, anxiety, and great sadness. The dream may contain situations of danger, discomfort, psychological or physical terror. Sufferers usually awaken in a state of distress and may be unable to return to sleep for a prolonged period of time.

Obsessive-Compulsive Disorder

This anxiety disorder is characterized by intrusive thoughts (obsessions), by repetitive

behaviors (compulsions), or both. Obsessions produce uneasiness, fear, or worry. Compulsions are then aimed at reducing the associated anxiety. Examples of compulsive behaviors include excessive washing or cleaning; repeated checking; extreme hoarding; and nervous rituals, such as switching the light on and off a certain number of times when entering a room. Intrusive thoughts are often sexual, violent, or religious in nature...

Prevalence
The number of cases of a specific disorder present in a given population at a certain time.

PTM
Post-traumatic model of dissociation.

Recurrent dreams
The same dream narrative or dreamscape is experienced over different occasions of sleep.

Schizophrenia
This mental disorder is characterized by a breakdown of thought processes and emotional responses. Symptoms include auditory hallucinations, paranoid or bizarre delusions, or disorganized speech and thinking. Sufferers from this disorder experience grave dysfunctions in their social functioning and in work.

SCID-D
Structural Clinical Interview for DSM-IV Dissociative Disorders.

Self-report measure
A type of psychological test in which a person fills out a survey or questionnaire with or without the help of an investigator.

Sleep deprivation
A sufficient lack of restorative sleep over a cumulative period so as to cause physical or psychiatric symptoms and affect routine performances of tasks.

Sleep paralysis
Sleep paralysis occurs when the normal paralysis during REM sleep manifests when falling asleep or awakening, often accompanied by hallucinations of danger or a malevolent presence in the room.

Sleep-wake cycle
A daily rhythmic activity cycle, based on 24-hour intervals, that is exhibited by many organisms.

State
When a symptom is acute, or transient, lasting from a few minutes to a few hours.

Trait
When a symptom forms part of the personality or character.

Trauma
An event or situation that causes great distress and disruption, and that creates substantial, lasting damage to the psychological development of a person.

Vivid dreams
A dream that is very clear, where the individual can remember the dream in great detail.

References

Abrams, M. P., Mulligan, A. D., Carleton, R. N., & Asmundson, G. J. G. (2008). Prevalence and correlates of sleep paralysis in adults reporting childhood sexual abuse. *Journal of Anxiety Disorders, 22*, 1535–1541.

Agargun, M. Y., Kara H., Ozer, O. A., Selvi, Y., Kiran, U., & Ozer, B. (2003). Clinical importance of nightmare disorder in patients with dissociative disorders. *Psychiatry Clinical Neuroscience, 57*, 575–579.

Agargun, M. Y., Kara, H., Ozer, O. A., Semiz, U., Selvi, Y., Kiran, U., & Tombul, T. (2001). Characteristics of patients with nocturnal dissociative disorders. *Sleep and Hypnosis, 3*, 131–134.

Allen, J. G., & Coyne, L. (1995). Dissociation and the vulnerability to psychotic experiences. *Journal of Nervous and Mental Disease, 183*, 615–622.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5.* Washington, D.C: American Psychiatric Association.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders (text revision).* Washington, DC: Author.

Arlow, J. (1966). Depersonalization and derealization. In: R. Loewenstein, L. M. Newman, M. Schur, & A. J. Solnit (Eds.), *Psychoanalysis–A general psychology* (pp. 456–478). New York, NY: International Universities Press, Inc.

Barrett, D. (1995). The dream character as a prototype for the multiple personality "alter." *Dissociation, 8*, 61-68.

Barrett, D. (1994). Dreaming as a normal model for multiple personality disorder. In S.J. Lynn & J.W. Rhue (Eds.), *Dissociation: Clinical and theoretical perspectives* (pp. 123–135). New York, NY: Guilford Press.

Bernstein, E., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. Journal of *Nervous and Mental Disease, 174*, 727–735.

Bob, P. (2004). Dissociative processes, multiple personality, and dream functions. *American Journal of Psychotherapy, 58*, 139-149.

Bremner, J. D. (2010). Cognitive processes in dissociation: Comment on Giesbrecht et al. (2008). *Psychological Bulletin, 136*, 1–6.

Bremner, J. D., & Brett, E. (1997). Trauma-related dissociative states and long-term psychopathology in posttraumatic stress disorder. *Journal of Trauma and Stress, 10*, 37–49.

Carlson, E. B., & Putnam, F. W. (2000). DES-II. *Psychoanalytic Inquiry, 20*, 361–366.

Foote, B., Smolin, Y., Kaplan, M., Legatt, M.E., & Lipschitz, D. (2006). Prevalence of dissociative disorders in psychiatric outpatients. *American Journal of Psychiatry, 163*, 623–629.

Franklin, J. (1990). Dreamlike thought and dream mode processes in the formation of personalities in MPD. *Dissociation, 3*, 70–80.

Gershuny, B. S., & Thayer, J. F. (1999). Relations among psychological trauma, dissociative phenomena, and trauma-related distress: A review and integration. *Clinical Psychology Review, 19*, 631–657.

Giesbrecht, T., Lynn, S. J., Lilienfeld, S. O., & Merckelbach, H. (2010). Cognitive processes, trauma, and dissociation—Misconceptions and misrepresentations: Reply to Bremner (2010). *Psychological Bulletin, 136*, 7–11.

Giesbrecht, T., Lynn, S. J., Lilienfeld, S. O., & Merckelbach, H. (2008). Cognitive processes in dissociation: An analysis of core theoretical assumptions. *Psychological Bulletin, 134*, 617–647.

Giesbrecht, T., Smeets, T., Leppink, J., Jelicic, M., & Merckelbach, H. (2007). Acute dissociation after 1 night of sleep loss. *Journal of Abnormal Psychology, 116*, 599–606.

Hacking, I. (1995). *Rewriting the soul: Multiple personality and the sciences*. Princeton, NJ: Princeton University Press.

Kihlstrom, J. F. (2005). Dissociative disorders. *Annual Review of Clinical Psychology, 10*, 1–27.

Koffel, E., & Watson, D. (2009). The two-factor structure of sleep complaints and its relation to depression and anxiety. *Journal of Abnormal Psychology, 118*, 183–194.

Lee, W. E., Kwok, C. H. T., Hunter, E. C. M., Richards, M. & David, A. S. (2010). Prevalence and childhood antecedents of depersonalization syndrome in a UK birth cohort. *Social Psychiatry and Psychiatric Epidemiology*, (in press).

Levin, R., & Fireman, G. (2002). Nightmare prevalence, nightmare distress, and self-reported psychological disturbance. *Sleep, 25*, 205–212.

Levitan, H. L. (1967). Depersonalization and the dream. *The Psychoanalytic Quaterly, 36*, 157-171.

McNally, R. J., & Clancy, S. A. (2005). Sleep paralysis in adults reporting repressed, recovered, or continuous memories of childhood sexual abuse. *Journal of Anxiety Disorders, 19*, 595–602.

Meares, R. (1999). The contribution of Hughlings Jackson to an understanding of dissociation. *American Journal of Psychiatry, 156*, 1850–1855.

Merckelbach, H., & Jelicic, M. (2004). Dissociative symptoms are related to endorsement of vague trauma items. *Comprehensive Psychiatry, 45*, 70–75.

Merckelbach, H., & Muris, P. (2002). The causal link between self-reported trauma and dissociation: A critical review. *Behaviour Research and Therapy, 39*, 245–254.

Merckelbach, H., Horselenberg, R., & Schmidt, H. (2002). Modeling the connection between self-reported trauma and dissociation in a student sample. *Personality and Individual Differences, 32*, 695–705.

Merckelbach, H., Muris, P., Rassin, E., & Horselenberg, R. (2000). Dissociative experiences and interrogative suggestibility in college students. *Personality and Individual Differences, 29*, 1133–1140.

Merckelbach, H., à Campo, J. A., Hardy, S., & Giesbrecht, T. (2005). Dissociation and fantasy proneness in psychiatric patients: A preliminary study. *Comprehensive Psychiatry, 46*, 181–185.

Morgan, C. A., Hazlett, G., Wang, S., Richardson, E. G., Schnurr, P., & Southwick, S. M. (2001). Symptoms of dissociation in humans experiencing acute, uncontrollable stress: A prospective investigation. *American Journal of Psychiatry, 158*, 1239–1247.

National Sleep Foundation. (2005). 2005 *Sleep in America poll.* Washington DC: Author.

Rauschenberg, S.L., Lynn, S.J. (1995). Fantasy proneness, DSM-III-r axis I psychopathology and dissociation. *Journal of Abnormal Psychology, 104*, 373-380.

Ross, C. A. (2011). Possession experiences in Dissociative Identity Disorder: A preliminary study. *Journal of Trauma & Dissociation, 12*, 393–400.

Ross, C. A., Anderson, G., Fleisher, W. P., & Norton, G. R. (1991). The frequency of Multiple Personality Disorder among psychiatric-inpatients. *American Journal of Psychiatry, 148*, 1717–1720.

Rufer, M., Fricke, S., Held, D., Cremer, J., & Hand, I. (2006). Dissociation and symptom dimensions of obsessive-compulsive disorder—A replication study. *European Archives of Psychiatry and Clinical Neuroscience, 256*, 146–150.

Sandberg, D., & Lynn, S.J. (1992). Dissociative experiences, psychopathology and adjustment, and child and adolescent maltreatment in female college students. *Journal of Abnormal Psychology, 101*, 717–723.

Sar, V., Tutkun, H., Alyanak, B., Bakim, B., & Baral, I. (2000). Frequency of dissociative disorders among psychiatric outpatients in Turkey. *Comprehensive Psychiatry, 41*, 216-222.

Schreiber, F. R. (1973). *Sybil*. Chicago, IL: Regnery.

Semiz, U. B., Basoglu, C., Ebrinc, S., & Cetin, M. (2008). Nightmare disorder, dream anxiety, and subjective sleep quality in patients with borderline personality disorder. *Psychiatry and Clinical Neurosciences, 62*, 48–55.

Simeon, D., & Abugel, J. (2006). *Feeling unreal: Depersonalization disorder and the loss of the self.* New York, NY: Oxford University Press.

Spiegel, D., Loewenstein, R. J., Lewis-Fernandez, R., Sar, V., Simeon, D., Vermetten, E., Cardena, E., & Dell, P. F. (2011). Dissociative disorders in DSM-5. *Depression and Anxiety, 28*, 824–852.

Spitzer, C., Vogel, M., Barnow, S., Freyberger, H. J., & Grabe, H. J. (2007). Psychopathology and alexithymia in severe mental illness: The impact of trauma and posttraumatic stress symptoms. *European Archives of Psychiatry and Clinical Neuroscience, 257*, 191–196

Steinberg, M. (2001). *The stranger in the mirror: Dissociation—the hidden epidemic.* New York, NY: Harper Collins Publishers, Inc.

Steinberg, M. (1994). *Structured Clinical Interview for DSM-IV Dissociative Disorders* (SCID-D) (p. 96). Washington, DC: American Psychiatric Press.

Suszek, H., & Kopera, M. (2005). Altered states of consciousness, dissociation, and dream recall. *Perceptual Motor Skills, 100*, 176–178.

Thigpen, C. H., & Cleckley, H. (1957). *The Three Faces of Eve.* New York, NY: McGraw-Hill.

Tutkun, H., Sar, V., Yargic, L. I., Ozpulat, T., Yanik, M., & Kiziltan, E. (1998). Frequency of dissociative disorders among psychiatric inpatients in a Turkish university clinic. *American Journal of Psychiatry, 155*, 800–805.

Van der Hart, O., & Horst, R. (1989). The dissociation theory of Pierre Janet. *Journal of Traumatic Stress, 2*, 2–11.

Van der Kloet, D., Giesbrecht, T., Lynn, S.J., Merckelbach, & de Zutter, A. (2011). Sleep normalization and decrease in dissociative experiences: Evaluation in an inpatient sample. *Journal of Abnormal Psychology*, Online First Publication, August 15, 2011. doi: 10.1037/a0024781

Vermetten, E., Schmahl, C., Lindner, S., Loewenstein, R.J. & Bremner, J.D. (2006). Hippocampal and amygdalar volumes in dissociative identity disorder. *American Journal of Psychiatry, 163*, 630–636.

Watson, D. (2001). Dissociations of the night: Individual differences in sleep-related experiences and their relation to dissociation and schizotypy. *Journal of Abnormal Psychology, 110*, 526–535.

Wright, D. B., & Loftus, E.F. (1999). Measuring dissociation: Comparison of alternative forms of the Dissociative Experiences Scale. *American Journal of Psychology, 112*, 497–519.

Yu, J. H., Ross, C. A., Keyes, B. B., Li, Y., Dai, Y. F., Zhang, T. H., Wang, L. L., Fang, Q., & Xiao, Z. P. (2010). Dissociative disorders among Chinese inpatients diagnosed with schizophrenia. *Journal of Trauma and Dissociation, 11*, 358–372.

Therapeutic Orientations

20
Therapeutic Orientations

Hannah Boettcher, Stefan G. Hofmann & Q. Jade Wu

In the past century, a number of psychotherapeutic orientations have gained popularity for treating mental illnesses. This module outlines some of the best-known therapeutic approaches and explains the history, techniques, advantages, and disadvantages associated with each. The most effective modern approach is cognitive behavioral therapy (CBT). We also discuss psychoanalytic therapy, person-centered therapy, and mindfulness-based approaches. Drug therapy and emerging new treatment strategies will also be briefly explored.

Learning Objectives

- Become familiar with the most widely practiced approaches to psychotherapy.
- For each therapeutic approach, consider: history, goals, key techniques, and empirical support.
- Consider the impact of emerging treatment strategies in mental health.

Introduction

The history of mental illness can be traced as far back as 1500 BCE, when the ancient Egyptians noted cases of "distorted concentration" and "emotional distress in the heart or mind" (Nasser, 1987). Today, nearly half of all Americans will experience mental illness at some point in their lives, and mental health problems affect more than one-quarter of the population in any given year (Kessler et al., 2005). Fortunately, a range of psychotherapies exist to treat mental illnesses. This module provides an overview of some of the best-known schools of thought in

psychotherapy. Currently, the most effective approach is called Cognitive Behavioral Therapy (CBT); however, other approaches, such as psychoanalytic therapy, person-centered therapy, and mindfulness-based therapies are also used—though the effectiveness of these treatments aren't as clear as they are for CBT. Throughout this module, note the advantages and disadvantages of each approach, paying special attention to their support by empirical research.

CBT is an approach to treating mental illness that involves work with a therapist as well as homework assignments between sessions. It has proven to be very effective for virtually all psychiatric illnesses. [Image: DFAT, https://goo.gl/bWmzaa, CC BY 2.0, https://goo.gl/BRvSA7]

Psychoanalysis and Psychodynamic Therapy

The earliest organized therapy for mental disorders was psychoanalysis. Made famous in the early 20th century by one of the best-known clinicians of all time, Sigmund Freud, this approach stresses that mental health problems are rooted in unconscious conflicts and desires. In order to resolve the mental illness, then, these unconscious struggles must be identified and addressed. Psychoanalysis often does this through exploring one's early childhood experiences that may have continuing repercussions on one's mental health in the present and later in life. Psychoanalysis is an intensive, long-term approach in which patients and therapists may meet multiple times per week, often for many years.

History of Psychoanalytic Therapy

Freud initially suggested that mental health problems arise from efforts to push inappropriate sexual urges out of conscious awareness (Freud, 1895/1955). Later, Freud suggested more generally that psychiatric problems are the result of tension between different parts of the mind: the id, the superego, and the ego. In Freud's *structural model,* the id represents pleasure-driven unconscious urges (e.g., our animalistic desires for sex and aggression), while the superego is the semi-conscious part of the mind where morals and societal judgment are internalized (e.g., the part of you that automatically knows how society expects you to behave). The ego—also partly conscious—mediates between the id and superego. Freud believed that bringing unconscious struggles like these (where the id demands one thing and the superego another) into conscious awareness would relieve the stress of the conflict (Freud, 1920/1955) —which became the goal of **psychoanalytic therapy**.

Although psychoanalysis is still practiced today, it has largely been replaced by the more broadly defined **psychodynamic therapy**. This latter approach has the same basic tenets as psychoanalysis, but is briefer, makes more of an effort to put clients in their social and interpersonal context, and focuses more on relieving psychological distress than on changing the person.
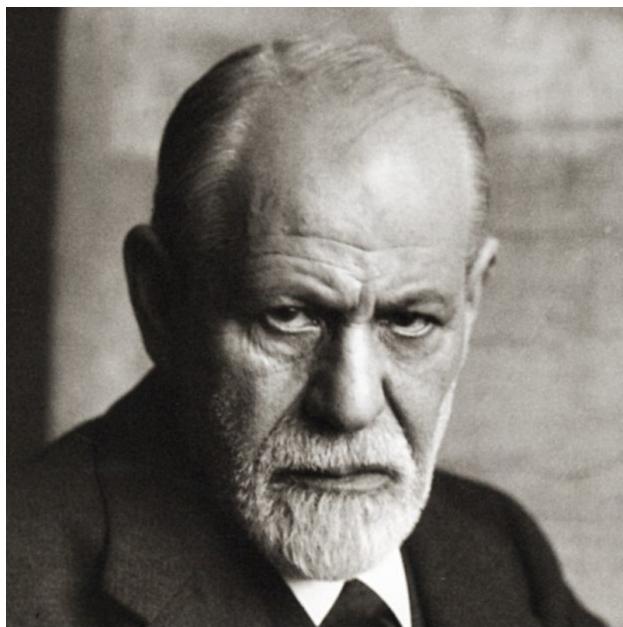
Building on the work of Josef Breuer and others, Sigmund Freud developed psychotherapeutic theories and techniques that became widely known as psychoanalysis or psychoanalytic therapy. [Image: CC0 Public Domain, https://goo.gl/m25gce]

Techniques in Psychoanalysis

Psychoanalysts and psychodynamic therapists employ several techniques to explore patients' unconscious mind. One common technique is called **free association**. Here, the patient shares any and all thoughts that come to mind, without attempting to organize or censor them in any way. For example, if you took a pen and paper and just wrote down whatever came into your head, letting one thought lead to the next without allowing conscious criticism to shape what you were writing, you would be doing free association. The analyst then uses his or her expertise to discern patterns or underlying meaning in the patient's

thoughts.

Sometimes, free association exercises are applied specifically to childhood recollections. That is, psychoanalysts believe a person's childhood relationships with caregivers often determine the way that person relates to others, and predicts later psychiatric difficulties. Thus, exploring these childhood memories, through free association or otherwise, can provide therapists with insights into a patient's psychological makeup.

Because we don't always have the ability to consciously recall these deep memories, psychoanalysts also discuss their patients' dreams. In Freudian theory, dreams contain not only *manifest* (or literal) content, but also *latent* (or symbolic) content (Freud, 1900; 1955). For example, someone may have a dream that his/her teeth are falling out—the manifest or actual content of the dream. However, dreaming that one's teeth are falling out could be a reflection of the person's unconscious concern about losing his or her physical attractiveness—the latent or metaphorical content of the dream. It is the therapist's job to help discover the latent content underlying one's manifest content through dream analysis.

In psychoanalytic and psychodynamic therapy, the therapist plays a receptive role—interpreting the patient's thoughts and behavior based on clinical experience and psychoanalytic theory. For example, if during therapy a patient begins to express unjustified anger toward the therapist, the therapist may recognize this as an act of *transference.* That is, the patient may be displacing feelings for people in his or her life (e.g., anger toward a parent) onto the therapist. At the same time, though, the therapist has to be aware of his or her own thoughts and emotions, for, in a related process, called *countertransference*, the therapist may displace his/her own emotions onto the patient.

The key to psychoanalytic theory is to have patients uncover the buried, conflicting content of their mind, and therapists use various tactics—such as seating patients to face away from them—to promote a freer self-disclosure. And, as a therapist spends more time with a patient, the therapist can come to view his or her relationship with the patient as another reflection of the patient's mind.

Advantages and Disadvantages of Psychoanalytic Therapy

Psychoanalysis was once the only type of psychotherapy available, but presently the number of therapists practicing this approach is decreasing around the world. Psychoanalysis is not appropriate for some types of patients, including those with severe psychopathology or intellectual disability. Further, psychoanalysis is often expensive because treatment usually

lasts many years. Still, some patients and therapists find the prolonged and detailed analysis very rewarding.

Perhaps the greatest disadvantage of psychoanalysis and related approaches is the lack of empirical support for their effectiveness. The limited research that has been conducted on these treatments suggests that they do not reliably lead to better mental health outcomes (e.g., Driessen et al., 2010). And, although there are some reviews that seem to indicate that long-term psychodynamic therapies might be beneficial (e.g., Leichsenring & Rabung, 2008), other researchers have questioned the validity of these reviews. Nevertheless, psychoanalytic theory was history's first attempt at formal treatment of mental illness, setting the stage for the more modern approaches used today.

Humanistic and Person-Centered Therapy

One of the next developments in therapy for mental illness, which arrived in the mid-20th century, is called humanistic or <u>person-centered therapy</u> (PCT). Here, the belief is that mental health problems result from an inconsistency between patients' behavior and their true personal identity. Thus, the goal of PCT is to create conditions under which patients can discover their self-worth, feel comfortable exploring their own identity, and alter their behavior to better reflect this identity.

History of Person-Centered Therapy

PCT was developed by a psychologist named Carl Rogers, during a time of significant growth in the movements of humanistic theory and human potential. These perspectives were based on the idea that humans have an inherent drive to realize and express their own capabilities and creativity. Rogers, in particular, believed that all people have the potential to change and improve, and that the role of therapists is to foster self-understanding in an environment where adaptive change is most likely to occur (Rogers, 1951). Rogers suggested that the therapist and patient must engage in a

The quality of the relationship between therapist and patient is of great importance in person-centered therapy. [Image: CC0 Public Domain, https://goo.gl/m25gce]

genuine, egalitarian relationship in which the therapist is nonjudgmental and empathetic. In PCT, the patient should experience both a vulnerability to anxiety, which motivates the desire to change, and an appreciation for the therapist's support.

Techniques in Person-Centered Therapy

Humanistic and person-centered therapy, like psychoanalysis, involves a largely unstructured conversation between the therapist and the patient. Unlike psychoanalysis, though, a therapist using PCT takes a passive role, guiding the patient toward his or her own self-discovery. Rogers's original name for PCT was *non-directive therapy*, and this notion is reflected in the flexibility found in PCT. Therapists do not try to change patients' thoughts or behaviors directly. Rather, their role is to provide the therapeutic relationship as a platform for personal growth. In these kinds of sessions, the therapist tends only to ask questions and doesn't provide any judgment or interpretation of what the patient says. Instead, the therapist is present to provide a safe and encouraging environment for the person to explore these issues for him- or herself.

An important aspect of the PCT relationship is the therapist's <u>unconditional positive regard</u> for the patient's feelings and behaviors. That is, the therapist is never to condemn or criticize the patient for what s/he has done or thought; the therapist is only to express warmth and empathy. This creates an environment free of approval or disapproval, where patients come to appreciate their value and to behave in ways that are congruent with their own identity.

Advantages and Disadvantages of Person-Centered Therapy

One key advantage of person-centered therapy is that it is highly acceptable to patients. In other words, people tend to find the supportive, flexible environment of this approach very rewarding. Furthermore, some of the themes of PCT translate well to other therapeutic approaches. For example, most therapists of any orientation find that clients respond well to being treated with nonjudgmental empathy. The main disadvantage to PCT, however, is that findings about its effectiveness are mixed. One possibility for this could be that the treatment is primarily based on *unspecific treatment factors*. That is, rather than using therapeutic techniques that are specific to the patient and the mental problem (i.e., *specific treatment factors*), the therapy focuses on techniques that can be applied to anyone (e.g., establishing a good relationship with the patient) (Cuijpers et al., 2012; Friedli, King, Lloyd, & Horder, 1997). Similar to how "one-size-fits-all" doesn't really fit every person, PCT uses the same practices for everyone, which may work for some people but not others. Further research is necessary to evaluate its utility as a therapeutic approach.

Cognitive Behavioral Therapy

Although both psychoanalysis and PCT are still used today, another therapy, **cognitive-behavioral therapy (CBT)**, has gained more widespread support and practice. CBT refers to a family of therapeutic approaches whose goal is to alleviate psychological symptoms by changing their underlying cognitions and behaviors. The premise of CBT is that thoughts, behaviors, and emotions interact and contribute to various mental disorders. For example, let's consider how a CBT therapist would view a patient who compulsively washes her hands for hours every day. First, the therapist would identify the patient's maladaptive thought: "If I don't wash my hands like this, I will get a disease and die." The therapist then identifies how this maladaptive *thought* leads to a maladaptive *emotion*: the feeling of anxiety when her hands aren't being washed. And finally, this maladaptive emotion leads to the maladaptive behavior: the patient washing her hands for hours every day.

CBT is a present-focused therapy (i.e., focused on the "now" rather than causes from the past, such as childhood relationships) that uses behavioral goals to improve one's mental illness. Often, these behavioral goals involve between-session homework assignments. For example, the therapist may give the hand-washing patient a worksheet to take home; on this worksheet, the woman is to write down every time she feels the urge to wash her hands, how she deals with the urge, and what behavior she replaces that urge with. When the patient has her next therapy session, she and the therapist review her "homework" together. CBT is a relatively
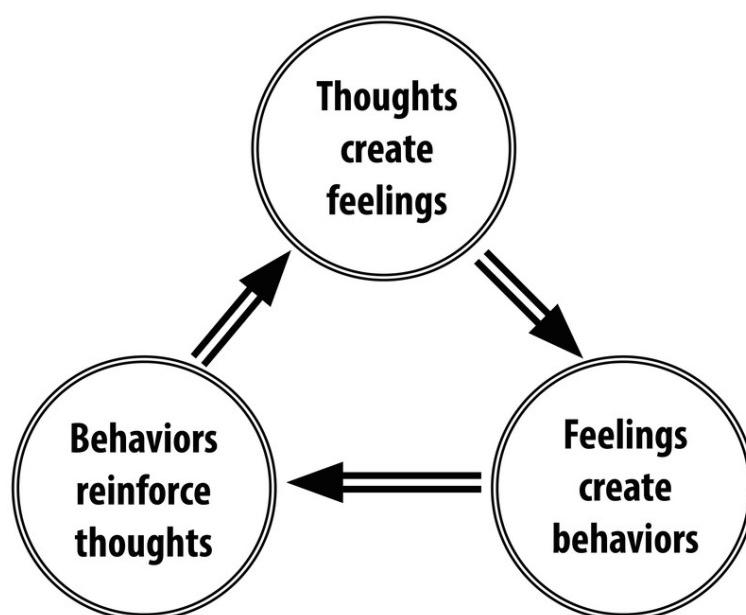
Pattern of thoughts, feelings, and behaviors addressed through cognitive-behavioral therapy.

brief intervention of 12 to 16 weekly sessions, closely tailored to the nature of the psychopathology and treatment of the specific mental disorder. And, as the empirical data shows, CBT has proven to be highly efficacious for virtually all psychiatric illnesses (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012).

History of Cognitive Behavioral Therapy

CBT developed from clinical work conducted in the mid-20th century by Dr. Aaron T. Beck, a psychiatrist, and Albert Ellis, a psychologist. Beck used the term **automatic thoughts** to refer to the thoughts depressed patients report experiencing spontaneously. He observed that these thoughts arise from three belief systems, or **schemas**: beliefs about the self, beliefs about the world, and beliefs about the future. In treatment, therapy initially focuses on identifying automatic thoughts (e.g., "If I don't wash my hands constantly, I'll get a disease"), testing their validity, and replacing maladaptive thoughts with more adaptive thoughts (e.g., "Washing my hands three times a day is sufficient to prevent a disease"). In later stages of treatment, the patient's maladaptive schemas are examined and modified. Ellis (1957) took a comparable approach, in what he called rational-emotive-behavioral therapy (REBT), which also encourages patients to evaluate their own thoughts about situations.

Techniques in CBT

Beck and Ellis strove to help patients identify maladaptive appraisals, or the untrue judgments and evaluations of certain thoughts. For example, if it's your first time meeting new people, you may have the automatic thought, "These people won't like me because I have nothing interesting to share." That thought itself is not what's troublesome; the appraisal (or evaluation) that it might have merit is what's troublesome. The goal of CBT is to help people make adaptive, instead of maladaptive, appraisals (e.g., "I do know interesting things!"). This technique of **reappraisal, or cognitive restructuring**, is a fundamental aspect of CBT. With cognitive restructuring, it is the therapist's job to help point out when a person has an inaccurate or maladaptive thought, so that the patient can either eliminate it or modify it to be more adaptive.

In addition to *thoughts*, though, another important treatment target of CBT is maladaptive *behavior*. Every time a person engages in maladaptive behavior (e.g., never speaking to someone in new situations), he or she reinforces the validity of the maladaptive thought, thus maintaining or perpetuating the psychological illness. In treatment, the therapist and patient work together to develop healthy behavioral habits (often tracked with worksheet-like homework), so that the patient can break this cycle of maladaptive thoughts and behaviors.

For many mental health problems, especially anxiety disorders, CBT incorporates what is known as **exposure therapy**. During exposure therapy, a patient confronts a problematic situation and fully engages in the experience instead of avoiding it. For example, imagine a man who is terrified of spiders. Whenever he encounters one, he immediately screams and panics. In exposure therapy, the man would be forced to confront and interact with spiders, rather than simply avoiding them as he usually does. The goal is to reduce the fear associated with the situation through *extinction learning,* a neurobiological and cognitive process by which the patient "unlearns" the irrational fear. For example, exposure therapy for someone terrified of spiders might begin with him looking at a cartoon of a spider, followed by him looking at pictures of real spiders, and later, him handling a plastic spider. After weeks of this incremental exposure, the patient may even be able to hold a live spider. After repeated exposure (starting small and building one's way up), the patient experiences less physiological fear and maladaptive thoughts about spiders, breaking his tendency for anxiety and subsequent avoidance.

Advantages and Disadvantages of CBT

CBT interventions tend to be relatively brief, making them cost-effective for the average consumer. In addition, CBT is an intuitive treatment that makes logical sense to patients. It can also be adapted to suit the needs of many different populations. One disadvantage, however, is that CBT does involve significant effort on the patient's part, because the patient is an active participant in treatment. Therapists often assign "homework" (e.g., worksheets for recording one's thoughts and behaviors) between sessions to maintain the cognitive and behavioral habits the patient is working on. The greatest strength of CBT is the abundance of empirical support for its effectiveness. Studies have consistently found CBT to be equally or more effective than other forms of treatment, including medication and other therapies (Butler, Chapman, Forman, & Beck, 2006; Hofmann et al., 2012). For this reason, CBT is considered a first-line treatment for many mental disorders.

Focus Topic: Pioneers of CBT

The central notion of CBT is the idea that a person's behavioral and emotional responses are causally influenced by one's thinking. The stoic Greek philosopher Epictetus is quoted as saying, "men are not moved by things, but by the view they take of them." Meaning, it is not the event per se, but rather one's assumptions (including interpretations and perceptions) of the event that are responsible for one's emotional response to it. Beck calls these assumptions

about events and situations automatic thoughts (Beck, 1979), whereas Ellis (1962) refers to these assumptions as self-statements. The cognitive model assumes that these cognitive processes cause the emotional and behavioral responses to events or stimuli. This causal chain is illustrated in Ellis's ABC model, in which A stands for the antecedent event, B stands for belief, and C stands for consequence. During CBT, the person is encouraged to carefully observe the sequence of events and the response to them, and then explore the validity of the underlying beliefs through behavioral experiments and reasoning, much like a detective or scientist.

Acceptance and Mindfulness-Based Approaches

Unlike the preceding therapies, which were developed in the 20th century, this next one was born out of age-old Buddhist and yoga practices. Mindfulness, or a process that tries to cultivate a nonjudgmental, yet attentive, mental state, is a therapy that focuses on one's awareness of bodily sensations, thoughts, and the outside environment. Whereas other therapies work to modify or eliminate these sensations and thoughts, mindfulness focuses on nonjudgmentally accepting them (Kabat-Zinn, 2003; Baer, 2003). For example, whereas CBT may actively confront and work to change a maladaptive thought, mindfulness therapy works to acknowledge and accept the thought, understanding that the thought is spontaneous and not what the person truly believes. There are two important components of mindfulness: (1) self-regulation of attention, and (2) orientation toward the present moment (Bishop et al., 2004). Mindfulness is thought to improve mental health because it draws attention away from past and future stressors, encourages acceptance of troubling thoughts and feelings, and promotes physical relaxation.

Techniques in Mindfulness-Based Therapy

Psychologists have adapted the practice of mindfulness as a form of psychotherapy, generally called mindfulness-based therapy (MBT). Several types of MBT have become popular in recent years, including *mindfulness-based stress reduction* (MBSR) (e.g., Kabat-Zinn, 1982) and *mindfulness-based cognitive therapy* (MBCT) (e.g., Segal, Williams, & Teasdale, 2002).

MBSR uses meditation, yoga, and attention to physical experiences to reduce stress. The hope is that reducing a person's overall stress will allow that person to more objectively evaluate his or her thoughts. In MBCT, rather than reducing one's general stress to address a specific problem, attention is focused on one's thoughts and their associated emotions. For example,

One of the most important advantages of mindfulness based therapy is its level of accessibility to patients. [Image: Wayne MacPhail, https://goo.gl/aSZanf, CC BY-NC SA 2.0, https://goo.gl/Toc0ZF]

MBCT helps prevent relapses in depression by encouraging patients to evaluate their own thoughts objectively and without value judgment (Baer, 2003). Although cognitive behavioral therapy (CBT) may seem similar to this, it focuses on "pushing out" the maladaptive thought, whereas mindfulness-based cognitive therapy focuses on "not getting caught up" in it. The treatments used in MBCT have been used to address a wide range of illnesses, including depression, anxiety, chronic pain, coronary artery disease, and fibromyalgia (Hofmann, Sawyer, Witt & Oh, 2010).

Mindfulness and acceptance—in addition to being therapies in their own right—have also been used as "tools" in other cognitive-behavioral therapies, particularly in dialectical behavior therapy (DBT) (e.g., Linehan, Amstrong, Suarez, Allmon, & Heard, 1991). DBT, often used in the treatment of borderline personality disorder, focuses on skills training. That is, it often employs mindfulness and cognitive behavioral therapy practices, but it also works to teach its patients "skills" they can use to correct maladaptive tendencies. For example, one skill DBT teaches patients is called *distress tolerance*—or, ways to cope with maladaptive thoughts and emotions in the moment. For example, people who feel an urge to cut themselves may be taught to snap their arm with a rubber band instead. The primary difference between DBT and CBT is that DBT employs techniques that address the symptoms of the problem (e.g., cutting oneself) rather than the problem itself (e.g., understanding the psychological motivation to cut oneself). CBT does not teach such skills training because of the concern that the skills—even though they may help in the short-term—may be harmful in the long-term, by maintaining maladaptive thoughts and behaviors.

DBT is founded on the perspective of a dialectical worldview. That is, rather than thinking of the world as "black and white," or "only good and only bad," it focuses on accepting that some things can have characteristics of both "good" and "bad." So, in a case involving maladaptive thoughts, instead of teaching that a thought is entirely bad, DBT tries to help patients be less judgmental of their thoughts (as with mindfulness-based therapy) and encourages change through therapeutic progress, using cognitive-behavioral techniques as well as mindfulness

exercises.

Another form of treatment that also uses mindfulness techniques is <u>acceptance and commitment therapy</u> (ACT) (Hayes, Strosahl, & Wilson, 1999). In this treatment, patients are taught to observe their thoughts from a detached perspective (Hayes et al., 1999). ACT encourages patients *not* to attempt to change or avoid thoughts and emotions they observe in themselves, but to recognize which are beneficial and which are harmful. However, the differences among ACT, CBT, and other mindfulness-based treatments are a topic of controversy in the current literature.

Advantages and Disadvantages of Mindfulness-Based Therapy

Two key advantages of mindfulness-based therapies are their acceptability and accessibility to patients. Because yoga and meditation are already widely known in popular culture, consumers of mental healthcare are often interested in trying related psychological therapies. Currently, psychologists have not come to a consensus on the efficacy of MBT, though growing evidence supports its effectiveness for treating mood and anxiety disorders. For example, one review of MBT studies for anxiety and depression found that mindfulness-based interventions generally led to moderate symptom improvement (Hofmann et al., 2010).

Emerging Treatment Strategies

Recent improvements in video chat technology along with the proliferation of mobile devices like smartphones and tablets has made online delivery of therapy more commonplace. [Image: Noba, CC BY 2.0, https://goo.gl/BRvSA7]

With growth in research and technology, psychologists have been able to develop new treatment strategies in recent years. Often, these approaches focus on enhancing existing treatments, such as cognitive-behavioral therapies, through the use of technological advances. For example, *internet-* and *mobile-delivered therapies* make psychological treatments more available, through smartphones and online access. Clinician-supervised online CBT modules allow patients to access treatment from home on their own schedule—an opportunity particularly important for patients with less geographic or socioeconomic access to traditional

treatments. Furthermore, smartphones help extend therapy to patients' daily lives, allowing for symptom tracking, homework reminders, and more frequent therapist contact.

Another benefit of technology is cognitive bias modification. Here, patients are given exercises, often through the use of video games, aimed at changing their problematic thought processes. For example, researchers might use a mobile app to train alcohol abusers to avoid stimuli related to alcohol. One version of this game flashes four pictures on the screen—three alcohol cues (e.g., a can of beer, the front of a bar) and one health-related image (e.g., someone drinking water). The goal is for the patient to tap the healthy picture as fast as s/he can. Games like these aim to target patients' automatic, subconscious thoughts that may be difficult to direct through conscious effort. That is, by repeatedly tapping the healthy image, the patient learns to "ignore" the alcohol cues, so when those cues are encountered in the environment, they will be less likely to trigger the urge to drink. Approaches like these are promising because of their accessibility, however they require further research to establish their effectiveness.

Yet another emerging treatment employs *CBT-enhancing pharmaceutical agents*. These are drugs used to improve the effects of therapeutic interventions. Based on research from animal experiments, researchers have found that certain drugs influence the biological processes known to be involved in learning. Thus, if people take these drugs while going through psychotherapy, they are better able to "learn" the techniques for improvement. For example, the antibiotic d-cycloserine improves treatment for anxiety disorders by facilitating the learning processes that occur during exposure therapy. Ongoing research in this exciting area may prove to be quite fruitful.

Pharmacological Treatments

Up until this point, all the therapies we have discussed have been talk-based or meditative practices. However, psychiatric medications are also frequently used to treat mental disorders, including schizophrenia, bipolar disorder, depression, and anxiety disorders. Psychiatric drugs are commonly used, in part, because they can be prescribed by general medical practitioners, whereas only trained psychologists are qualified to deliver effective psychotherapy. While drugs and CBT therapies tend to be almost equally effective, choosing the best intervention depends on the disorder and individual being treated, as well as other factors—such as treatment availability and comorbidity (i.e., having multiple mental or physical disorders at once). Although many new drugs have been introduced in recent decades, there is still much we do not understand about their mechanism in the brain. Further research is needed to refine our understanding of both pharmacological and behavioral treatments before we can make firm claims about their effectiveness.

Integrative and Eclectic Psychotherapy

In discussing therapeutic orientations, it is important to note that some clinicians incorporate techniques from multiple approaches, a practice known as **integrative or eclectic psychotherapy**. For example, a therapist may employ distress tolerance skills from DBT (to resolve short-term problems), cognitive reappraisal from CBT (to address long-standing issues), and mindfulness-based meditation from MBCT (to reduce overall stress). And, in fact, between 13% and 42% of therapists have identified their own approaches as integrative or eclectic (Norcross & Goldfried, 2005).

Conclusion

Throughout human history we have had to deal with mental illness in one form or another. Over time, several schools of thought have emerged for treating these problems. Although various therapies have been shown to work for specific individuals, cognitive behavioral therapy is currently the treatment most widely supported by empirical research. Still, practices like psychodynamic therapies, person-centered therapy, mindfulness-based treatments, and acceptance and commitment therapy have also shown success. And, with recent advances in research and technology, clinicians are able to enhance these and other therapies to treat more patients more effectively than ever before. However, what is important in the end is that people actually seek out mental health specialists to help them with their problems. One of the biggest deterrents to doing so is that people don't understand what psychotherapy really entails. Through understanding how current practices work, not only can we better educate people about how to get the help they need, but we can continue to advance our treatments to be more effective in the future.

Outside Resources

Article: A personal account of the benefits of mindfulness-based therapy
https://www.theguardian.com/lifeandstyle/2014/jan/11/julie-myerson-mindfulness-based-cognitive-therapy

Article: The Effect of Mindfulness-Based Therapy on Anxiety and Depression: A Meta-Analytic Review
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2848393/

Video: An example of a person-centered therapy session.
https://www.youtube.com/watch?v=4wTVbzvBH0k

Video: Carl Rogers, the founder of the humanistic, person-centered approach to psychology, discusses the position of the therapist in PCT.
https://www.youtube.com/watch?v=o0neRQzudzw

Video: CBT (cognitive behavioral therapy) is one of the most common treatments for a range of mental health problems, from anxiety, depression, bipolar, OCD or schizophrenia. This animation explains the basics and how you can decide whether it's best for you or not.
https://www.youtube.com/watch?v=9c_Bv_FBE-c

Web: An overview of the purpose and practice of cognitive behavioral therapy (CBT)
http://psychcentral.com/lib/in-depth-cognitive-behavioral-therapy/

Web: The history and development of psychoanalysis
http://www.freudfile.org/psychoanalysis/history.html

Discussion Questions

1. Psychoanalytic theory is no longer the dominant therapeutic approach, because it lacks empirical support. Yet many consumers continue to seek psychoanalytic or psychodynamic treatments. Do you think psychoanalysis still has a place in mental health treatment? If so, why?

2. What might be some advantages and disadvantages of technological advances in psychological treatment? What will psychotherapy look like 100 years from now?

3. Some people have argued that all therapies are about equally effective, and that they all

affect change through common factors such as the involvement of a supportive therapist. Does this claim sound reasonable to you? Why or why not?

4. When choosing a psychological treatment for a specific patient, what factors besides the treatment's demonstrated efficacy should be taken into account?

Vocabulary

Acceptance and commitment therapy
A therapeutic approach designed to foster nonjudgmental observation of one's own mental processes.

Automatic thoughts
Thoughts that occur spontaneously; often used to describe problematic thoughts that maintain mental disorders.

Cognitive bias modification
Using exercises (e.g., computer games) to change problematic thinking habits.

Cognitive-behavioral therapy (CBT)
A family of approaches with the goal of changing the thoughts and behaviors that influence psychopathology.

Comorbidity
Describes a state of having more than one psychological or physical disorder at a given time.

Dialectical behavior therapy (DBT)
A treatment often used for borderline personality disorder that incorporates both cognitive-behavioral and mindfulness elements.

Dialectical worldview
A perspective in DBT that emphasizes the joint importance of change and acceptance.

Exposure therapy
A form of intervention in which the patient engages with a problematic (usually feared) situation without avoidance or escape.

Free association
In psychodynamic therapy, a process in which the patient reports all thoughts that come to mind without censorship, and these thoughts are interpreted by the therapist.

Integrative or eclectic psychotherapy
Also called integrative psychotherapy, this term refers to approaches combining multiple orientations (e.g., CBT with psychoanalytic elements).

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Also called integrative psychotherapy, this term refers to approaches combining multiple orientations (e.g., CBT with psychoanalytic elements).

Mindfulness
A process that reflects a nonjudgmental, yet attentive, mental state.

Mindfulness-based therapy
A form of psychotherapy grounded in mindfulness theory and practice, often involving meditation, yoga, body scan, and other features of mindfulness exercises.

Person-centered therapy
A therapeutic approach focused on creating a supportive environment for self-discovery.

Psychoanalytic therapy
Sigmund Freud's therapeutic approach focusing on resolving unconscious conflicts.

Psychodynamic therapy
Treatment applying psychoanalytic principles in a briefer, more individualized format.

Reappraisal, or Cognitive restructuring
The process of identifying, evaluating, and changing maladaptive thoughts in psychotherapy.

Schema
A mental representation or set of beliefs about something.

Unconditional positive regard
In person-centered therapy, an attitude of warmth, empathy and acceptance adopted by the therapist in order to foster feelings of inherent worth in the patient.

References

Baer, R. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice, 10*, 125–143.

Beck, A. T. (1979). *Cognitive therapy and the emotional disorders*. New York, NY: New American Library/Meridian.

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*, 230–241.

Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive behavioral therapy: A review of meta-analyses. *Clinical Psychology Review, 26*, 17–31.

Cuijpers, P., Driessen, E., Hollon, S.D., van Oppen, P., Barth, J., & Andersson, G. (2012). The efficacy of non-directive supportive therapy for adult depression: A meta-analysis. *Clinical Psychology Review, 32*, 280–291.

Driessen, E., Cuijpers, P., de Maat, S. C. M., Abbass, A. A., de Jonghe, F., & Dekker, J. J. M. (2010). The efficacy of short-term psychodynamic psychotherapy for depression: A meta-analysis. *Clinical Psychology Review, 30*, 25–36.

Ellis, A. (1962). *Reason and emotion in psychotherapy*. New York, NY: Lyle Stuart.

Ellis, A. (1957). Rational psychotherapy and individual psychology. *Journal of Individual Psychology, 13*, 38–44.

Freud, S. (1955). *The interpretation of dreams*. London, UK: Hogarth Press (Original work published 1900).

Freud, S. (1955). *Studies on hysteria*. London, UK: Hogarth Press (Original work published 1895).

Freud. S. (1955). *Beyond the pleasure principle*. H London, UK: Hogarth Press (Original work published 1920).

Friedli, K., King, M. B., Lloyd, M., & Horder, J. (1997). Randomized controlled assessment of non-directive psychotherapy versus routine general-practitioner care. *Lancet*, 350,\\n1662–1665.

Hayes, S. C., Strosahl, K., & Wilson, K. G. (1999). *Acceptance and Commitment Therapy*. New\\nYork, NY: Guilford Press.

Hofmann, S. G., Asnaani, A., Vonk, J. J., Sawyer, A. T., & Fang, A. (2012). The efficacy of cognitive behavioral therapy: A review of meta-analyses. *Cognitive Therapy and Research, 36*, 427–440.

Hofmann, S. G., Sawyer, A. T., Witt, A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical*

Psychology, 78, 169–183

Kabat-Zinn J. (2003). Mindfulness-based interventions in context: Past, present, and future. *Clinical Psychology: Science and Practice, 10*, 144–156.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients\\ nbased on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry, 4*, 33–47.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age of onset distribution of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593–602.

Leichsenring, F., & Rabung, S. (2008). Effectiveness of long-term psychodynamic psychotherapy: A meta-analysis. *Journal of the American Medical Association, 300*,1551–1565.

Linehan, M. M., Amstrong, H.-E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitive-behavioral treatment of chronically suicidal borderline patients. *Archives of General Psychiatry, 48*, 1060–1064.

Nasser, M. (1987). Psychiatry in ancient Egypt. *Bulletin of the Royal College of Psychiatrists*, 11, 420-422.

Norcross, J. C. & Goldfried, M. R. (2005). *Handbook of Psychotherapy Integration*. New York, NY: Oxford University Press.

Rogers, C. (1951). *Client-Centered Therapy*. Cambridge, MA: Riverside Press.

Segal, Z. V., Williams, J. M. G., & Teasdale, J. D. (2002). *Mindfulness-Based Cognitive Therapy\\nfor Depression: A New Approach to Preventing Relapse*. New York, NY: Guilford Press.

Industrial and Organisational Psychology (Work)

21
Industrial/Organizational (I/O) Psychology

Berrin Erdogan & Talya N. Bauer

This module provides an introduction to industrial and organizational (I/O) psychology. I/O psychology is an area of psychology that specializes in the scientific study of behavior in organizational settings and the application of psychology to understand work behavior. The U.S. Department of Labor estimates that I/O psychology, as a field, will grow 26% by the year 2018. I/O psychologists typically have advanced degrees such as a Ph.D. or master's degree and may work in academic, consulting, government, military, or private for-profit and not-for-profit organizational settings. Depending on the state in which they work, I/O psychologists may be licensed. They might ask and answer questions such as "What makes people happy at work?" "What motivates employees at work?" "What types of leadership styles result in better performance of employees?" "Who are the best applicants to hire for a job?" One hallmark of I/O psychology is its basis in data and evidence to answer such questions, and I/O psychology is based on the scientist-practitioner model. The key individuals and studies in the history of I/O psychology are addressed in this module. Further, professional I/O associations are discussed, as are the key areas of competence developed in I/O master's programs.

Learning Objectives

- Define industrial and organizational (I/O) psychology.
- Describe what an I/O psychologist does.
- List the professional associations of I/O psychologists.
- Identify major milestones in the history of I/O psychology.

What is Industrial and Organizational (I/O) Psychology?

The term Industrial Organizational psychology can be applied to businesses, schools, clubs, and even to sports teams. [Image: Kevin Dooley, https://goo.gl/b45OFM, CC BY 2.0, https://goo.gl/BRvSA7]

Psychology as a field is composed of many different areas. When thinking of psychology, the person on the street probably imagines the clinical psychologist who studies and treats dysfunctional behavior or maybe the criminal psychologist who has become familiar due to popular TV shows such as *Law & Order*. I/O psychology may be underrepresented on TV, but it is a fast-growing and influential branch of psychology.

What is **I/O psychology**? Briefly, it can be defined as the scientific study of behavior in organizational settings and the application of psychology to understand work behavior. In other words, while general psychology concerns itself with behavior of individuals in general, I/O psychology focuses on understanding employee behavior in work settings. For example, they ask questions such as: *How can organizations recruit and select the people they need in order to remain productive? How can organizations assess and improve the performance of their employees? What work and non-work factors contribute to the happiness, effectiveness, and well-being of employees in the workplace? How does work influence non-work behavior and happiness? What motivates employees at work?* All of these important queries fall within the domain of I/O psychology. Table 1 presents a list of tasks I/O psychologists may perform in their work. This is an extensive list, and one person will not be responsible for all these tasks. The I/O psychology field prepares and trains individuals to be more effective in performing the tasks listed in this table.

At this point you may be asking yourself: *Does psychology really need a special field to study work behaviors? In other words, wouldn't the findings of general psychology be sufficient to understand how individuals behave at work?* The answer is an underlined *no*. Employees behave differently at work compared with how they behave in general. While some fundamental principles of psychology definitely explain how employees behave at work (such as selective perception or the desire to relate to those who are similar to us), organizational settings are

Task	Description
Job Analysis	Conducting interviews or distributing surveys to collect information about jobs, and then determining skill, knowledge, and ability requirements of jobs, as well as preparing job descriptions.
Developing Employee Selection Systems	Ensuring that job candidates fit job requirements by developing employee selection systems. Evaluating tests and other selection procedures such as interviews or work samples to determine whether test scores actually predict future high and low performers, and ensuring that the selection method in place is legal and effective in meeting the current and future talent needs of the organization.
Designing Performance Appraisal Systems	Measuring employee performance to differentiate between high and low performers and identify improvement opportunities. Performance assessment systems are used for the purposes of making decisions about employees, such as promotion, termination, or reward, as well as providing feedback to employees to improve future performance.
Developing Compensation Systems	Designing pay systems that ensure employees are compensated in an equitable way. Effective compensation systems are fair when compared with how similar employees are rewarded in other organizations, rewards competencies that are strategically important to the organization, and differentiates between high and low performers.
Training and Development	Creating systems to identify employees with training and development needs, designing training programs to meet these needs, conducting these training programs, and assessing the effectiveness of these training programs.
Solve Talent Management Problems	Helping resolve problems relating to talent management using data-driven approaches. For example, I/O psychologists may conduct exit interviews and analyze employee attitude survey data to determine causes of employee engagement problems and derive solutions to solve these problems.

Table 1. Sample Tasks I/O Psychologists May Perform

unique. To begin with, organizations have a hierarchy. They have job descriptions for employees. Individuals go to work not only to seek fulfillment and to remain active, but also to receive a paycheck and satisfy their financial needs. Even when they dislike their jobs, many stay and continue to work until a better alternative comes along. All these constraints suggest that how we behave at work may be somewhat different from how we would behave without these constraints. According to the U.S. Bureau of Labor Statistics, in 2011, more than 149 million individuals worked at least part time and spent many hours of the week working— see Figure 1 for a breakdown (U.S. Department of Labor, 2011). In other words, we spend a large portion of our waking hours at work. How happy we are with our jobs and our careers is a primary predictor of how happy and content we are with our lives in general (Erdogan, Bauer, Truxillo, & Mansfield, 2012). Therefore, the I/O psychology field has much to offer to individuals and organizations interested in increasing employee productivity, retention, and effectiveness while at the same time ensuring that employees are happy and healthy.
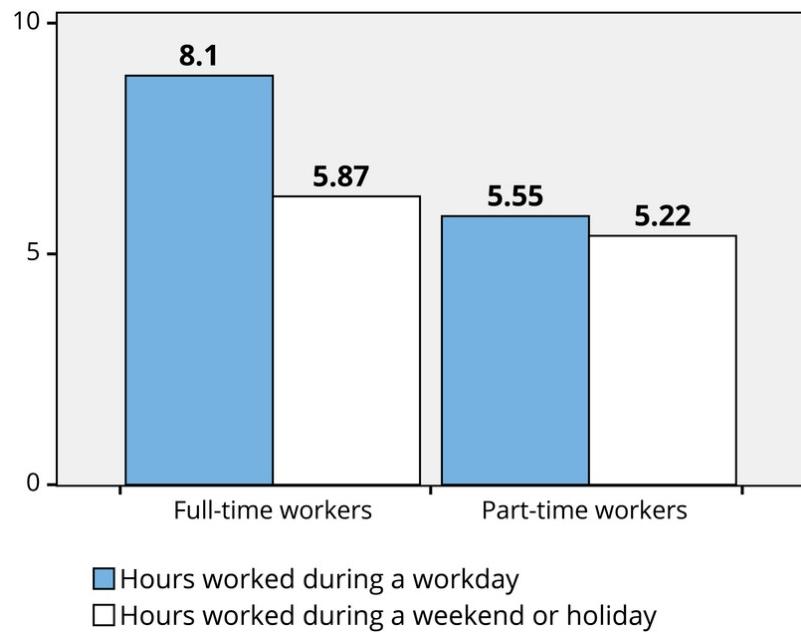
Figure 1. Average Hours Worked by Full Time and Part Time Workers

It seems that I/O psychology is useful for organizations, but how is it helpful to you? Findings of I/O psychology are useful and relevant to everyone who is planning to work in an organizational setting. Note that we are not necessarily taking about a business setting. Even if you are planning to form your own band, or write a novel, or work in a not-for-profit organization, you will likely be working in, or interacting with, organizations. Understanding why people behave the way they do will be useful to you by helping you motivate and influence your coworkers and managers, communicate your message more effectively, negotiate a contract, and manage your own work life and career in a way that fits your life and career goals.

I/O psychologists conduct studies that look at important questions such as "What makes people happy at work?" and "What types of leadership styles result in better performance of employees?"

What Does an I/O Psychologist Do?

I/O psychology is a scientific discipline. Similar to other scientific fields, it uses

research methods and approaches, and tests hypotheses. However, I/O psychology is a social science. This means that its findings will always be less exact than in physical sciences. Physical sciences study natural matter in closed systems and in controlled conditions. Social sciences study human behavior in its natural setting, with multiple factors that can affect behavior, so their predictive ability will never be perfect. While we can expect that two hydrogen and one oxygen atom will always make water when combined, combining job satisfaction with fair treatment will not always result in high performance. There are many influences on employee behaviors at work, and how they behave depends on the person interacting with a given situation on a given day.

Despite the lack of precise results, I/O psychology uses scientific principles to study organizational phenomena. Many of those who conduct these studies are located at universities, in psychology or management departments, but there are also many who work in private, government, or military organizations who conduct studies about I/O-related topics. These scholars conduct studies to understand topics such as "What makes people happy at work?" "What motivates employees at work?" "What types of leadership styles result in better performance of employees?" I/O psychology researchers tend to have a Ph.D. degree, and they develop hypotheses, find ways of reasonably testing those hypotheses in organizational settings, and distribute their findings by publishing in academic journals.

I/O psychology is based on the <u>scientist-practitioner model</u>. In other words, while the science part deals with understanding how and why things happen at work, the practitioner side takes a data-driven approach to understand organizational problems and to apply these findings to solving these specific problems facing the organization. While practitioners may learn about the most recent research findings by reading the journals that publish these results, some conduct their own research in their own companies, and some companies employ many I/O psychologists. Google is one company that collects and analyzes data to deal with talent-related issues. Google uses an annual *Googlegeist* (roughly translating to the spirit of Google) survey to keep tabs on how happy employees are. When survey results as well as turnover data showed that new mothers were twice as likely to leave the company as the average employee, the company made changes in its maternity leave policy and mitigated the problem (Manjoo, 2013). In other words, I/O psychologists both contribute to the science of workplace behavior by generating knowledge and solve actual problems organizations face by designing the workplace recruitment, selection, and workforce management policies using this knowledge.

While the scientist-practitioner model is the hoped-for ideal, not everyone agrees that it captures the reality. Some argue that practitioners are not always up to date about what scientists know and, conversely, that scientists do not study what practitioners really care

about often enough (Briner & Rousseau, 2011). At the same time, consumers of research should be wary, as there is some pseudo-science out there. The issues related to I/O psychology are important to organizations, which are sometimes willing to pay a lot of money for solutions to their problems, with some people trying to sell their most recent invention in employee testing, training, performance appraisal, and coaching to organizations. Many of these claims are not valid, and there is very little evidence that some of these products, in fact, improve the performance or retention of employees. Therefore, organizations and consumers of I/O-related knowledge and interventions need to be selective and ask to see such evidence (which is not the same as asking to see the list of other clients who purchased their products!).

Careers in I/O Psychology

The U.S. Department of Labor estimates that I/O psychology as a field is expected to grow 26% by the year 2018 (American Psychological Association, 2011) so the job outlook for I/O psychologists is good. Helping organizations understand and manage their workforce more effectively using science-based tools is important regardless of the shape of the economy, and I/O psychology as a field remains a desirable career option for those who have an interest in psychology in a work-related context coupled with an affinity for research methods and statistics.

I/O Psychologists work in a variety of settings that include, but are not limited to education, research and government organizations. [Image: WOCinTech Chat, https://goo.gl/RxTG7B, CC BY 2.0, https://goo.gl/BRvSA7]

If you would like to refer to yourself as a psychologist in the United States, then you would need to be licensed, and this requirement also applies to I/O psychologists. Licensing requirements vary by state (see **www.siop.org** for details). However, it is possible to pursue a career relating to I/O psychology without holding the title psychologist. Licensing requirements usually include a doctoral degree in psychology. That said, there are many job opportunities for those with a master's degree in I/O psychology, or in related fields such as organizational behavior and human resource management.

Academics and practitioners who work in I/O psychology or related fields are often members of the Society for Industrial and Organizational Psychology (SIOP). Students with an interest in I/O psychology are eligible to become an affiliated member of this organization, even if they are not pursuing a degree related to I/O psychology. SIOP membership brings benefits including networking opportunities and subscriptions to an academic journal of I/O research and a newsletter detailing current issues in I/O. The organization supports its members by providing forums for information and idea exchange, as well as monitoring developments about the field for its membership. SIOP is an independent organization but also a subdivision of American Psychological Association (APA), which is the scientific organization that represents psychologists in the United States. Different regions of the world have their own associations for I/O psychologists. For example, the European Association for Work and Organizational Psychology (EAWOP) is the premiere organization for I/O psychologists in Europe, where I/O psychology is typically referred to as work and organizational psychology. A global federation of I/O psychology organizations, named the Alliance for Organizational Psychology, was recently established. It currently has three member organizations (SIOP, EAWOP, and the Organizational Psychology Division of the International Association for Applied Psychology, or Division 1), with plans to expand in the future. The Association for Psychological Science (APS) is another association to which many I/O psychologists belong.

Those who work in the I/O field may be based at a university, teaching and researching I/O-related topics. Some private organizations employing I/O psychologists include DDI, HUMRRO, Corporate Executive Board (CEB), and IBM Smarter Workforce. These organizations engage in services such as testing, performance management, and administering attitude surveys. Many organizations also hire in-house employees with expertise in I/O psychology–related fields to work in departments including human resource management or "people analytics." According to a 2011 membership survey of SIOP, the largest percentage of members were employed in academic institutions, followed by those in consulting or independent practice, private sector organizations, and public sector organizations (Society for Industrial and Organizational Psychology, 2011). Moreover, the majority of respondents (86%) were not licensed.

History of I/O Psychology

The field of I/O psychology is almost as old as the field of psychology itself. In order to understand any field, it helps to understand how it started and evolved. Let's look at the pioneers of I/O psychology and some defining studies and developments in the field (see Koppes, 1997; Landy, 1997).

The term "founding father" of I/O psychology is usually associated with Hugo Munsterberg of Harvard University. His 1913 book on *Psychology and Industrial Efficiency*, is considered to be the first textbook in I/O psychology. The book is the first to discuss topics such as how to find the best person for the job and how to design jobs to maintain efficiency by dealing with fatigue.

Hugo Munsterberg, the founding father of I/O psychology who in turn was influenced by the writings of Wilhelm Wundt, the founding father of experimental psychology. [Image: CC0 Public Domain, https://goo.gl/m25gce]

One of his contemporaries, Frederick Taylor, was not a psychologist and is considered to be a founding father not of I/O psychology but of scientific management. Despite his non-psychology background, his ideas were important to the development of the I/O psychology field, because they evolved at around the same time, and some of his innovations, such as job analysis, later became critically important aspects of I/O psychology. Taylor was an engineer and management consultant who pioneered time studies where management observed how work was being performed and how it could be performed better. For example, after analyzing how workers shoveled coal, he decided that the optimum weight of coal to be lifted was 21 pounds, and he designed a shovel to be distributed to workers for this purpose. He instituted mandatory breaks to prevent fatigue, which increased efficiency of workers. His book *Principles of Scientific Management* was highly influential in pointing out how management could play a role in increasing efficiency of human factors.

Lillian Gilbreth was an engineer and I/O psychologist, arguably completing the first Ph.D. in I/O psychology. She and her husband, Frank Gilbreth, developed Taylor's ideas by conducting time and motion studies, but also bringing more humanism to these efforts. Gilbreth underlined the importance of how workers felt about their jobs, in addition to how they could perform their jobs more efficiently. She was also the first to bring attention to the value of observing job candidates while they performed their jobs, which is the foundation behind work sample tests. The Gilbreths ran a successful consulting business based on these ideas. Her advising of GE in kitchen redesign resulted in foot-pedal trash cans and shelves in refrigerator doors. Her life with her husband and 12 kids is detailed in a book later made into a 1950 movie, *Cheaper by the Dozen*, authored by two of her children.

World War I was a turning point for the field of I/O psychology, as it popularized the notion of testing for placement purposes. During and after the war, more than 1 million Americans were tested, which exposed a generation of men to the idea of using tests as part of selection and placement. Following the war, the idea of testing started to take root in the private industry. American Psychological Association President Robert Yerkes, as well as Walter Dill Scott and Walter Van Dyke Bingham from the Carnegie Institute of Technology (later Carnegie Mellon University) division of applied psychology department were influential in popularizing the idea of testing by offering their services to the U.S. Army.

Another major development in the field was the Hawthorne Studies, conducted under the leadership of Harvard University researchers Elton Mayo and Fritz Roethlisberger at the Western Electric Co. in the late 1920s. Originally planned as a study of the effects of lighting on productivity, this series of studies revealed unexpected and surprising findings. For example, one study showed that regardless of the level of change in lighting, productivity remained high and started worsening only when it was reduced to the level of moonlight. Further exploration resulted in the hypothesis that employees were responding to being paid attention to and being observed, rather than the level of lighting (called the "Hawthorne effect"). Another study revealed the phenomenon of group pressure on individuals to limit production to be below their capacity. These studies are considered to be classics in I/O psychology due to their underlining the importance of understanding employee psychology to make sense of employee behavior in the workplace.

Since then, thousands of articles have been published on topics relating to I/O psychology, and it is one of the influential subdimensions of psychology. I/O psychologists generate scholarly knowledge and have a role in recruitment, selection, assessment and development of talent, and design and improvement of the workplace. One of the major projects I/O psychologists contributed to is O*Net, a vast database of occupational information sponsored by the U.S. government, which contains information on hundreds of jobs, listing tasks, knowledge, skill, and ability requirements of jobs, work activities, contexts under which work is performed, as well as personality and values that are critical to effectiveness on those jobs. This database is free and a useful resource for students, job seekers, and HR professionals.

Findings of I/O psychology have the potential to contribute to the health and happiness of people around the world. When people are asked how happy they are with their lives, their feelings about the work domain are a big part of how they answer this question. I/O psychology research uncovers the secrets of a happy workplace (see Table 2). Organizations designed around these principles will see direct benefits, in the form of employee happiness, well-being, motivation, effectiveness, and retention.

Need Satisfaction	Make sure that employee basic needs are met. Work is how people around the world satisfy their financial, belonging, status, and power needs.
Meaningful Engagement	Ensure that work provides a challenge and is meaningful. Be sure that work provides growth opportunities.
Stress	Work is a major source of stress. Make stress manageable by ensuring that work does not overly interfere with personal life. Be aware of work related stressors such as poor quality management, unreasonable deadlines, harassment, and unfairness.

Table 2. Designing Work for Happiness: Research Based Recommendations. Based on research summarized in Erdogan et al., 2012.

We have now reviewed what I/O psychology is, what I/O psychologists do, the history of I/O, associations related to I/O psychology, and accomplishments of I/O psychologists. Those interested in finding out more about I/O psychology are encouraged to visit the outside resources below to learn more.

Outside Resources

Careers: Occupational information via O*Net's database containing information on hundreds of standardized and occupation-specific descriptors
http://www.onetonline.org/

Organization: Society for Industrial/Organizational Psychology (SIOP)
http://www.siop.org

Organization: Alliance for Organizational Psychology (AOP)
http://www.allianceorgpsych.org

Organization: American Psychological Association (APA)
http://www.apa.org

Organization: Association for Psychological Science (APS)
http://www.psychologicalscience.org/

Organization: European Association of Work and Organizational Psychology (EAWOP)
http://www.eawop.org

Organization: International Association for Applied Psychology (IAAP)
http://www.iaapsy.org/division1/

Training: For more about graduate training programs in I/O psychology and related fields
http://www.siop.org/gtp/

Video: An introduction to I/O Psychology produced by the Society for Industrial and Organizational Psychology.
https://www.youtube.com/watch?v=oG5ew9rhkBg

Discussion Questions

1. How would an I/O psychologist go about establishing whether a selection test is better than an alternative?

2. What would be the advantages and downsides of pursuing a career in I/O psychology?

3. If your organization is approached by a company stating that it has an excellent training program in leadership, how would you assess if the program is good or not? What information would you seek before making a decision?

4. After reading this module, what topics in I/O psychology seemed most interesting to you?

Vocabulary

Hawthorne Effect
An effect in which individuals change or improve some facet of their behavior as a result of their awareness of being observed.

Hawthorne Studies
A series of well-known studies conducted under the leadership of Harvard University researchers, which changed the perspective of scholars and practitioners about the role of human psychology in relation to work behavior.

Industrial/Organizational psychology
Scientific study of behavior in organizational settings and the application of psychology to understand work behavior.

O*Net
A vast database of occupational information containing data on hundreds of jobs.

Scientist-practitioner model
The dual focus of I/O psychology, which entails practical questions motivating scientific inquiry to generate knowledge about the work-person interface and the practitioner side applying this scientific knowledge to organizational problems.

Society for Industrial and Organizational Psychology (SIOP)
A professional organization bringing together academics and practitioners who work in I/O psychology and related areas. It is Division 14 of the American Psychological Association (APA).

Work and organizational psychology
Preferred name for I/O psychology in Europe.

References

American Psychological Association. (2011). Psychology job forecast: Partly sunny. Retrieved on 1/25/2013 from http://www.apa.org/gradpsych/2011/03/cover-sunny.aspx

Briner, R. B., & Rousseau, D. M. (2011). Evidence-based I-O psychology: Not there yet. *Industrial and Organizational Psychology*, 4, 3–22.

Erdogan, B., Bauer, T. N., Truxillo, D. M., & Mansfield, L. R. (2012). Whistle while you work: A review of the life satisfaction literature. *Journal of Management*, 38, 1038–1083.

Koppes, L. L. (1997). American female pioneers of industrial and organizational psychology during the early years. *Journal of Applied Psychology*, 82, 500–515.

Landy, F. J. (1997). Early influences on the development of industrial and organizational psychology. *Journal of Applied Psychology*, 82, 467–477.

Manjoo, F. (2013). The happiness machine: How Google became such a great place to work. Retrieved on 2/1/2013 from http://www.slate.com/articles/technology/technology/2013/-01/google_people_operations_the_secrets_of_the_world_s_most_scientific_human.html

Society for Industrial and Organizational Psychology. (2011). SIOP 2011 membership survey, employment setting report. Retrieved on 2/5/2013 from http://www.siop.org/userfiles/image/2011MemberSurvey/Employment_Setting_Report.pdf

U.S. Department of Labor, Bureau of Labor Statistics. (2011). Economic news release. Retrieved on 1/20/2013 from http://www.bls.gov/news.release/atus.t04.htm

Introduction and History

22
History of Psychology

David B. Baker & Heather Sperry

This module provides an introduction and overview of the historical development of the science and practice of psychology in America. Ever-increasing specialization within the field often makes it difficult to discern the common roots from which the field of psychology has evolved. By exploring this shared past, students will be better able to understand how psychology has developed into the discipline we know today.

Learning Objectives

- Describe the precursors to the establishment of the science of psychology.
- Identify key individuals and events in the history of American psychology.
- Describe the rise of professional psychology in America.
- Develop a basic understanding of the processes of scientific development and change.
- Recognize the role of women and people of color in the history of American psychology.

Introduction

It is always a difficult question to ask, where to begin to tell the story of the history of psychology. Some would start with ancient Greece; others would look to a demarcation in the late 19th century when the science of psychology was formally proposed and instituted. These two perspectives, and all that is in between, are appropriate for describing a history of psychology. The interested student will have no trouble finding an abundance of resources on all of these time frames and perspectives (Goodwin, 2011; Leahey, 2012; Schultz & Schultz,

2007). For the purposes of this module, we will examine the development of psychology in America and use the mid-19th century as our starting point. For the sake of convenience, we refer to this as a history of modern psychology.
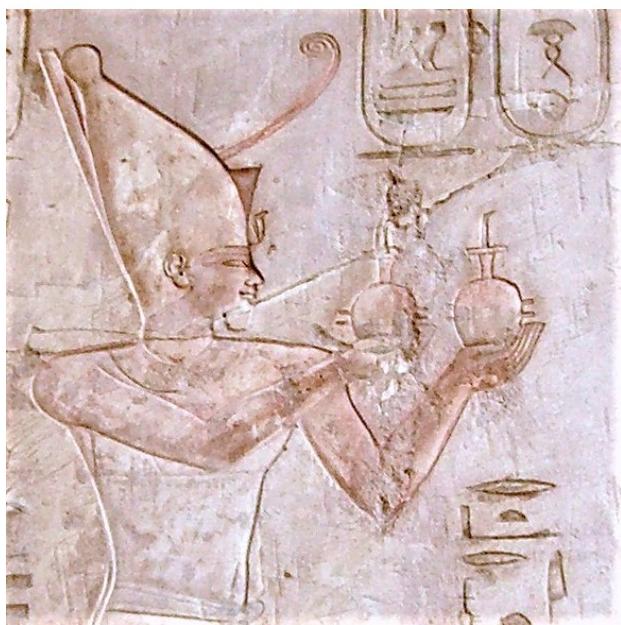
The earliest records of a psychological experiment go all the way back to the Pharaoh Psamtik I of Egypt in the 7th Century B.C. [Image: Neithsabes, CC0 Public Domain, https://goo.gl/m25gce]

Psychology is an exciting field and the history of psychology offers the opportunity to make sense of how it has grown and developed. The history of psychology also provides perspective. Rather than a dry collection of names and dates, the history of psychology tells us about the important intersection of time and place that defines who we are. Consider what happens when you meet someone for the first time. The conversation usually begins with a series of questions such as, "Where did you grow up?" "How long have you lived here?" "Where did you go to school?" The importance of history in defining who we are cannot be overstated. Whether you are seeing a physician, talking with a counselor, or applying for a job, everything begins with a history. The same is true for studying the history of psychology; getting a history of the field helps to make sense of where we are and how we got here.

A Prehistory of Psychology

Precursors to American psychology can be found in philosophy and physiology. Philosophers such as John Locke (1632–1704) and Thomas Reid (1710–1796) promoted empiricism, the idea that all knowledge comes from experience. The work of Locke, Reid, and others emphasized the role of the human observer and the primacy of the senses in defining how the mind comes to acquire knowledge. In American colleges and universities in the early 1800s, these principles were taught as courses on mental and moral philosophy. Most often these courses taught about the mind based on the faculties of intellect, will, and the senses (Fuchs, 2000).

Physiology and Psychophysics

Philosophical questions about the nature of mind and knowledge were matched in the 19th century by physiological investigations of the sensory systems of the human observer. German physiologist Hermann von Helmholtz (1821–1894) measured the speed of the **neural impulse** and explored the physiology of hearing and vision. His work indicated that our senses can deceive us and are not a mirror of the external world. Such work showed that even though the human senses were fallible, the mind could be measured using the methods of science. In all, it suggested that a science of psychology was feasible.

An important implication of Helmholtz's work was that there is a psychological reality and a physical reality and that the two are not identical. This was not a new idea; philosophers like John Locke had written extensively on the topic, and in the 19th century, philosophical speculation about the nature of mind became subject to the rigors of science.

The question of the relationship between the mental (experiences of the senses) and the material (external reality) was investigated by a number of German researchers including Ernst Weber and Gustav Fechner. Their work was called **psychophysics**, and it introduced methods for measuring the relationship between physical stimuli and human perception that would serve as the basis for the new science of psychology (Fancher & Rutherford, 2011).

The formal development of modern psychology is usually credited to the work of German physician, physiologist, and philosopher Wilhelm Wundt (1832–1920). Wundt helped to establish the field of experimental psychology by serving as a strong promoter of the idea that psychology could be an experimental field and by providing classes, textbooks, and a laboratory for training students. In 1875, he joined the faculty at the University of Leipzig and quickly began to make plans for the creation of a program of experimental psychology. In 1879, he complemented his lectures on experimental psychology with a laboratory experience: an event that has served as the popular date for the establishment of the science of psychology.

Wilhelm Wundt is considered one of the founding figures of modern psychology. [CC0 Public Domain, https://goo.gl/m25gce]

The response to the new science was immediate and global. Wundt attracted students from

around the world to study the new experimental psychology and work in his lab. Students were trained to offer detailed self-reports of their reactions to various stimuli, a procedure known as **introspection**. The goal was to identify the elements of **consciousness**. In addition to the study of sensation and perception, research was done on mental chronometry, more commonly known as reaction time. The work of Wundt and his students demonstrated that the mind could be measured and the nature of consciousness could be revealed through scientific means. It was an exciting proposition, and one that found great interest in America. After the opening of Wundt's lab in 1879, it took just four years for the first psychology laboratory to open in the United States (Benjamin, 2007).

Scientific Psychology Comes to the United States

Wundt's version of psychology arrived in America most visibly through the work of Edward Bradford Titchener (1867–1927). A student of Wundt's, Titchener brought to America a brand of experimental psychology referred to as "**structuralism**." Structuralists were interested in the contents of the mind—what the mind is. For Titchener, the general adult mind was the proper focus for the new psychology, and he excluded from study those with mental deficiencies, children, and animals (Evans, 1972; Titchener, 1909).

Experimental psychology spread rather rapidly throughout North America. By 1900, there were more than 40 laboratories in the United States and Canada (Benjamin, 2000). Psychology in America also organized early with the establishment of the American Psychological Association (APA) in 1892. Titchener felt that this new organization did not adequately represent the interests of experimental psychology, so, in 1904, he organized a group of colleagues to create what is now known as the Society of Experimental Psychologists (Goodwin, 1985). The group met annually to discuss research in experimental psychology. Reflecting the times, women researchers were not invited (or welcome). It is interesting to note that Titchener's first doctoral student was a woman, Margaret Floy Washburn (1871–1939). Despite many barriers, in 1894, Washburn became the first woman in America to earn a Ph.D. in psychology and, in 1921, only the second woman to be elected president of the American Psychological Association (Scarborough & Furumoto, 1987).

Striking a balance between the science and practice of psychology continues to this day. In 1988, the American Psychological Society (now known as the Association for Psychological Science) was founded with the central mission of advancing psychological science.

Toward a Functional Psychology
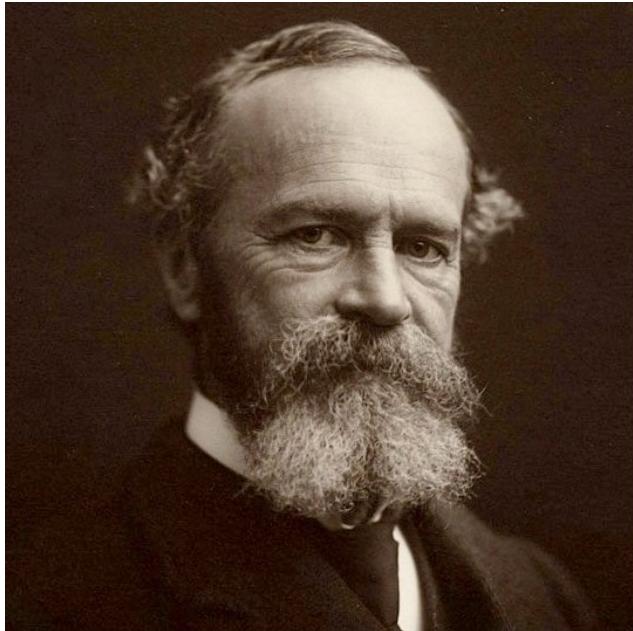
William James was one of the leading figures in a new perspective on psychology called functionalism. [Image: Notman Studios, CC0 Public Domain, https://goo.gl/m25gce]

While Titchener and his followers adhered to a structural psychology, others in America were pursuing different approaches. William James, G. Stanley Hall, and James McKeen Cattell were among a group that became identified with "functionalism." Influenced by Darwin's evolutionary theory, functionalists were interested in the activities of the mind—what the mind does. An interest in functionalism opened the way for the study of a wide range of approaches, including animal and comparative psychology (Benjamin, 2007).

William James (1842–1910) is regarded as writing perhaps the most influential and important book in the field of psychology, *Principles of Psychology,* published in 1890.

Opposed to the reductionist ideas of Titchener, James proposed that consciousness is ongoing and continuous; it cannot be isolated and reduced to elements. For James, consciousness helped us adapt to our environment in such ways as allowing us to make choices and have personal responsibility over those choices.

At Harvard, James occupied a position of authority and respect in psychology and philosophy. Through his teaching and writing, he influenced psychology for generations. One of his students, Mary Whiton Calkins (1863–1930), faced many of the challenges that confronted Margaret Floy Washburn and other women interested in pursuing graduate education in psychology. With much persistence, Calkins was able to study with James at Harvard. She eventually completed all the requirements for the doctoral degree, but Harvard refused to grant her a diploma because she was a woman. Despite these challenges, Calkins went on to become an accomplished researcher and the first woman elected president of the American Psychological Association in 1905 (Scarborough & Furumoto, 1987).

G. Stanley Hall (1844–1924) made substantial and lasting contributions to the establishment of psychology in the United States. At Johns Hopkins University, he founded the first psychological laboratory in America in 1883. In 1887, he created the first journal of psychology in America, *American Journal of Psychology*. In 1892, he founded the American Psychological Association (APA); in 1909, he invited and hosted Freud at Clark University (the only time Freud visited America). Influenced by evolutionary theory, Hall was interested in the process of

adaptation and human development. Using surveys and questionnaires to study children, Hall wrote extensively on child development and education. While graduate education in psychology was restricted for women in Hall's time, it was all but non-existent for African Americans. In another first, Hall mentored Francis Cecil Sumner (1895–1954) who, in 1920, became the first African American to earn a Ph.D. in psychology in America (Guthrie, 2003).

James McKeen Cattell (1860–1944) received his Ph.D. with Wundt but quickly turned his interests to the assessment of **individual differences**. Influenced by the work of Darwin's cousin, Frances Galton, Cattell believed that mental abilities such as intelligence were inherited and could be measured using mental tests. Like Galton, he believed society was better served by identifying those with superior intelligence and supported efforts to encourage them to reproduce. Such beliefs were associated with **eugenics** (the promotion of selective breeding) and fueled early debates about the contributions of heredity and environment in defining who we are. At Columbia University, Cattell developed a department of psychology that became world famous also promoting psychological science through advocacy and as a publisher of scientific journals and reference works (Fancher, 1987; Sokal, 1980).

The Growth of Psychology

Throughout the first half of the 20th century, psychology continued to grow and flourish in America. It was large enough to accommodate varying points of view on the nature of mind and behavior. **Gestalt psychology** is a good example. The Gestalt movement began in Germany with the work of Max Wertheimer (1880–1943). Opposed to the reductionist approach of Wundt's laboratory psychology, Wertheimer and his colleagues Kurt Koffka (1886–1941), Wolfgang Kohler (1887–1967), and Kurt Lewin (1890–1947) believed that studying the whole of any experience was richer than studying individual aspects of that experience. The saying "the whole is greater than the sum of its parts" is a Gestalt perspective. Consider that a melody is an additional element beyond the collection of notes that comprise it. The Gestalt psychologists proposed that the mind often processes information simultaneously rather than sequentially. For instance, when you look at a photograph, you see a whole image, not just a collection of pixels of color. Using Gestalt principles, Wertheimer and his colleagues also explored the nature of learning and thinking. Most of the German Gestalt psychologists were Jewish and were forced to flee the Nazi regime due to the threats posed on both academic and personal freedoms. In America, they were able to introduce a new audience to the Gestalt perspective, demonstrating how it could be applied to perception and learning (Wertheimer, 1938). In many ways, the work of the Gestalt psychologists served as a precursor to the rise of **cognitive psychology** in America (Benjamin, 2007).

Behaviorism emerged early in the 20th century and became a major force in American psychology. Championed by psychologists such as John B. Watson (1878–1958) and B. F. Skinner (1904–1990), behaviorism rejected any reference to mind and viewed overt and observable behavior as the proper subject matter of psychology. Through the scientific study of behavior, it was hoped that laws of learning could be derived that would promote the prediction and control of behavior. Russian physiologist Ivan Pavlov (1849–1936) influenced early behaviorism in America. His work on conditioned learning, popularly referred to as classical conditioning, provided support for the notion that learning and behavior were controlled by events in the environment and could be explained with no reference to mind or consciousness (Fancher, 1987).

For decades, behaviorism dominated American psychology. By the 1960s, psychologists began to recognize that behaviorism was unable to fully explain human behavior because it neglected mental processes. The turn toward a cognitive psychology was not new. In the 1930s, British psychologist Frederic C. Bartlett (1886–1969) explored the idea of the constructive mind, recognizing that people use their past experiences to construct frameworks in which to understand new experiences. Some of the major pioneers in American cognitive psychology include Jerome Bruner (1915–), Roger Brown (1925–1997), and George Miller (1920–2012). In the 1950s, Bruner conducted pioneering studies on cognitive aspects of sensation and perception. Brown conducted original research on language and memory, coined the term "flashbulb memory," and figured out how to study the tip-of-the-tongue phenomenon (Benjamin, 2007). Miller's research on working memory is legendary. His 1956 paper "The Magic Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information"is one of the most highly cited papers in psychology. A popular interpretation of Miller's research was that the number of bits of information an average human can hold in **working memory** is 7 ± 2. Around the same time, the study of computer science was growing and was used as an analogy to explore and understand how the mind works. The work of Miller and others in the 1950s and 1960s has inspired tremendous interest in cognition and neuroscience, both of which dominate much of contemporary American psychology.

Applied Psychology in America

In America, there has always been an interest in the application of psychology to everyday life. Mental testing is an important example. Modern intelligence tests were developed by the French psychologist Alfred Binet (1857–1911). His goal was to develop a test that would identify schoolchildren in need of educational support. His test, which included tasks of reasoning and problem solving, was introduced in the United States by Henry Goddard (1866–1957) and later standardized by Lewis Terman (1877–1956) at Stanford University. The assessment and

meaning of intelligence has fueled debates in American psychology and society for nearly 100 years. Much of this is captured in the nature-nurture debate that raises questions about the relative contributions of heredity and environment in determining intelligence (Fancher, 1987).

Applied psychology was not limited to mental testing. What psychologists were learning in their laboratories was applied in many settings including the military, business, industry, and education. The early 20th century was witness to rapid advances in applied psychology. Hugo Munsterberg (1863–1916) of Harvard University made contributions to such areas as employee selection, eyewitness testimony, and psychotherapy. Walter D. Scott (1869–1955) and Harry Hollingworth (1880–1956) produced original work on the psychology of advertising and marketing. Lillian Gilbreth (1878–1972) was a pioneer in industrial psychology and engineering psychology. Working with her husband, Frank, they promoted the use of time and motion studies to improve efficiency in industry. Lillian also brought the efficiency movement to the home, designing kitchens and appliances including the pop-up trashcan and refrigerator door shelving. Their psychology of efficiency also found plenty of applications at home with their 12 children. The experience served as the inspiration for the movie *Cheaper by the Dozen* (Benjamin, 2007).

Clinical psychology was also an early application of experimental psychology in America. Lightner Witmer (1867–1956) received his Ph.D. in experimental psychology with Wilhelm Wundt and returned to the University of Pennsylvania, where he opened a psychological clinic

Although this is what most people see in their mind's eye when asked to envision a "psychologist" the APA recognizes as many as 58 different divisions of psychology. [Image: Bliusa, https://goo.gl/yrSUCr, CC BY-SA 4.0, https://goo.gl/6pvNbx]

in 1896. Witmer believed that because psychology dealt with the study of sensation and perception, it should be of value in treating children with learning and behavioral problems. He is credited as the founder of both clinical and school psychology (Benjamin & Baker, 2004).

Psychology as a Profession

As the roles of psychologists and the needs of the public continued to change, it was necessary for psychology to begin to define itself as a profession. Without standards for training and practice, anyone could use the title psychologist and offer services to the public. As early as 1917, applied

psychologists organized to create standards for education, training, and licensure. By the 1930s, these efforts led to the creation of the American Association for Applied Psychology (AAAP). While the American Psychological Association (APA) represented the interests of academic psychologists, AAAP served those in education, industry, consulting, and clinical work.

The advent of WWII changed everything. The psychiatric casualties of war were staggering, and there were simply not enough mental health professionals to meet the need. Recognizing the shortage, the federal government urged the AAAP and APA to work together to meet the mental health needs of the nation. The result was the merging of the AAAP and the APA and a focus on the training of professional psychologists. Through the provisions of National Mental Health Act of 1946, funding was made available that allowed the APA, the Veterans Administration, and the Public Health Service to work together to develop training programs that would produce clinical psychologists. These efforts led to the convening of the Boulder Conference on Graduate Education in Clinical Psychology in 1949 in Boulder, Colorado. The meeting launched doctoral training in psychology and gave us the **scientist-practitioner model** of training. Similar meetings also helped launch doctoral training programs in counseling and school psychology. Throughout the second half of the 20th century, alternatives to Boulder have been debated. In 1973, the Vail Conference on Professional Training in Psychology proposed the **scholar-practitioner model** and the Psy.D. degree (Doctor of Psychology). It is a training model that emphasizes clinical training and practice that has become more common (Cautin & Baker, in press).

Psychology and Society

Given that psychology deals with the human condition, it is not surprising that psychologists would involve themselves in social issues. For more than a century, psychology and psychologists have been agents of social action and change. Using the methods and tools of science, psychologists have challenged assumptions, stereotypes, and stigma. Founded in 1936, the Society for the Psychological Study of Social Issues (SPSSI) has supported research and action on a wide range of social issues. Individually, there have been many psychologists whose efforts have promoted social change. Helen Thompson Woolley (1874–1947) and Leta S. Hollingworth (1886–1939) were pioneers in research on the psychology of sex differences. Working in the early 20th century, when women's rights were marginalized, Thompson examined the assumption that women were overemotional compared to men and found that emotion did not influence women's decisions any more than it did men's. Hollingworth found that menstruation did not negatively impact women's cognitive or motor abilities. Such work combatted harmful stereotypes and showed that psychological research could contribute to

social change (Scarborough & Furumoto, 1987).

Among the first generation of African American psychologists, Mamie Phipps Clark (1917–1983) and her husband Kenneth Clark (1914–2005) studied the psychology of race and demonstrated the ways in which school segregation negatively impacted the self-esteem of African American children. Their research was influential in the 1954 Supreme Court ruling in the case of *Brown v. Board of Education,* which ended school segregation (Guthrie, 2003). In psychology, greater advocacy for issues impacting the African American community were advanced by the creation of the Association of Black Psychologists (ABPsi) in 1968.

Mamie Phipps Clark and Kenneth Clark studied the negative impacts of segregated education on African-American children. [Image: Penn State Special Collection, https://goo.gl/WP7Dgc, CC BY-NC-SA 2.0, https://goo.gl/Toc0ZF]

In 1957, psychologist Evelyn Hooker (1907–1996) published the paper "The Adjustment of the Male Overt Homosexual," reporting on her research that showed no significant differences in psychological adjustment between homosexual and heterosexual men. Her research helped to de-pathologize homosexuality and contributed to the decision by the American Psychiatric Association to remove homosexuality from the Diagnostic and Statistical Manual of Mental Disorders in 1973 (Garnets & Kimmel, 2003).

Conclusion

Growth and expansion have been a constant in American psychology. In the latter part of the 20th century, areas such as social, developmental, and personality psychology made major contributions to our understanding of what it means to be human. Today neuroscience is enjoying tremendous interest and growth.

As mentioned at the beginning of the module, it is a challenge to cover all the history of psychology in such a short space. Errors of omission and commission are likely in such a selective review. The history of psychology helps to set a stage upon which the story of

psychology can be told. This brief summary provides some glimpse into the depth and rich content offered by the history of psychology. The learning modules in the Noba psychology collection are all elaborations on the foundation created by our shared past. It is hoped that you will be able to see these connections and have a greater understanding and appreciation for both the unity and diversity of the field of psychology.

Timeline

1600s – Rise of empiricism emphasizing centrality of human observer in acquiring knowledge

1850s - Helmholz measures neural impulse / Psychophysics studied by Weber & Fechner

1859 - Publication of Darwin's *Origin of Species*

1879 - Wundt opens lab for experimental psychology

1883 - First psychology lab opens in the United States

1887 – First American psychology journal is published: *American Journal of Psychology*

1890 – James publishes *Principles of Psychology*

1892 – APA established

1894 – Margaret Floy Washburn is first U.S. woman to earn Ph.D. in psychology

1904 - Founding of Titchener's experimentalists

1905 - Mary Whiton Calkins is first woman president of APA

1909 – Freud's only visit to the United States

1913 - John Watson calls for a psychology of behavior

1920 – Francis Cecil Sumner is first African American to earn Ph.D. in psychology

1921 – Margaret Floy Washburn is second woman president of APA

1930s – Creation and growth of the American Association for Applied Psychology (AAAP) / Gestalt psychology comes to America

1936- Founding of The Society for the Psychological Study of Social Issues

1940s – Behaviorism dominates American psychology

1946 – National Mental Health Act

1949 – Boulder Conference on Graduate Education in Clinical Psychology

1950s – Cognitive psychology gains popularity

1954 – *Brown v. Board of Education*

1957 – Evelyn Hooker publishes T*he Adjustment of the Male Overt Homosexual*

1968 – Founding of the Association of Black Psychologists

1973 – Psy.D. proposed at the Vail Conference on Professional Training in Psychology

1988 – Founding of the American Psychological Society (now known as the Association for Psychological Science)

Outside Resources

Podcast: History of Psychology Podcast Series
http://www.yorku.ca/christo/podcasts/

Web: Advances in the History of Psychology
http://ahp.apps01.yorku.ca/

Web: Center for the History of Psychology
http://www.uakron.edu/chp

Web: Classics in the History of Psychology
http://psychclassics.yorku.ca/

Web: Psychology's Feminist Voices
http://www.feministvoices.com/

Web: This Week in the History of Psychology
http://www.yorku.ca/christo/podcasts/

Discussion Questions

1. Why was psychophysics important to the development of psychology as a science?

2. How have psychologists participated in the advancement of social issues?

3. Name some ways in which psychology began to be applied to the general public and everyday problems.

4. Describe functionalism and structuralism and their influences on behaviorism and cognitive psychology.

Vocabulary

Behaviorism
The study of behavior.

Cognitive psychology
The study of mental processes.

Consciousness
Awareness of ourselves and our environment.

Empiricism
The belief that knowledge comes from experience.

Eugenics
The practice of selective breeding to promote desired traits.

Flashbulb memory
A highly detailed and vivid memory of an emotionally significant event.

Functionalism
A school of American psychology that focused on the utility of consciousness.

Gestalt psychology
An attempt to study the unity of experience.

Individual differences
Ways in which people differ in terms of their behavior, emotion, cognition, and development.

Introspection
A method of focusing on internal processes.

Neural impulse
An electro-chemical signal that enables neurons to communicate.

Practitioner-Scholar Model
A model of training of professional psychologists that emphasizes clinical practice.

Psychophysics

Study of the relationships between physical stimuli and the perception of those stimuli.

Realism

A point of view that emphasizes the importance of the senses in providing knowledge of the external world.

Scientist-practitioner model

A model of training of professional psychologists that emphasizes the development of both research and clinical skills.

Structuralism

A school of American psychology that sought to describe the elements of conscious experience.

Tip-of-the-tongue phenomenon

The inability to pull a word from memory even though there is the sensation that that word is available.

References

Benjamin, L. T. (2007). *A brief history of modern psychology*. Malden, MA: Blackwell Publishing.

Benjamin, L. T. (2000). The psychology laboratory at the turn of the 20th century. *American Psychologist*, 55, 318–321.

Benjamin, L. T., & Baker, D. B. (2004). *From séance to science: A history of the profession of psychology in America*. Belmont, CA: Wadsworth/Thomson Learning.

Cautin, R., & Baker, D. B. (in press). A history of education and training in professional psychology. In B. Johnson & N. Kaslow (Eds.), *Oxford handbook of education and training in professional psychology*. New York, NY: Oxford University Press.

Evans, R. B. (1972). E. B. Titchener and his lost system. Journal of the History of the Behavioral Sciences, 8, 168–180.

Fancher, R. E. (1987). *The intelligence men: Makers of the IQ controversy*. New York, NY: W.W. Norton & Company.

Fancher, R. E., & Rutherford, A. (2011). *Pioneers of psychology: A history* (4th ed.). New York, NY: W.W. Norton & Company.

Fuchs, A. H. (2000). Contributions of American mental philosophers to psychology in the United States. *History of Psychology*, 3, 3–19.

Garnets, L., & Kimmel, D. C. (2003). What a light it shed: The life of Evelyn Hooker. In L. Garnets & D. C. Kimmel (Eds.), *Psychological perspectives on gay, lesbian, and bisexual experiences* (2nd ed., pp. 31–49). New York, NY: Columbia University Press.

Goodwin, C. J. (2011). *A history of modern psychology* (4th ed.). Hoboken, NJ: Wiley.

Goodwin, C. J. (1985). On the origins of Titchener's experimentalists. *Journal of the History of the Behavioral Sciences*, 21, 383–389.

Guthrie, R. V. (2003). *Even the rat was white: A historical view of psychology* (2nd ed.). Boston, MA: Allyn & Bacon.

Leahey, T. H. (2012). *A history of psychology: From antiquity to modernity* (7th ed.). Upper Saddle River, NJ: Pearson Education.

Scarborough, E. & Furumoto, L. (1987). *The untold lives: The first generation of American women psychologists*. New York, NY: Columbia University Press.

Shultz, D. P., & Schultz, S. E. (2007). *A history of modern psychology* (9th ed.). Stanford, CT: Cengage Learning.

Sokal, M. M. (1980). Science and James McKeen Cattell. *Science*, 209, 43–52.

Titchener, E. B. (1909). *A text-book of psychology*. New York, NY: Macmillan.

Wertheimer, M. (1938). Gestalt theory. In W. D. Ellis (Ed.), *A source book of Gestalt psychology* (1-11). New York, NY: Harcourt.

23
Cooperation

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Humans are social animals. This means we work together in groups to achieve goals that benefit everyone. From building skyscrapers to delivering packages to remote island nations, modern life requires that people cooperate with one another. However, people are also motivated by self-interest, which often stands as an obstacle to effective cooperation. This module explores the concept of cooperation and the processes that both help and hinder it.

Learning Objectives

- Define "cooperation"
- Distinguish between different social value orientations
- List 2 influences on cooperation
- Explain 2 methods psychologists use to research cooperation

Introduction

As far back as the early 1800s, people imagined constructing a tunnel under the sea to connect France and England. But, digging under the English Channel—a body of water spanning more than 20 miles (32 km)—would be an enormous and difficult undertaking. It would require a massive amount of resources as well as coordinating the efforts of people from two separate nations, speaking two different languages. Not until 1988 did the idea of the Channel Tunnel (or "Chunnel" as it is known) change from dream to reality, as construction began. It took ten different construction companies-- financed by three separate banks-- six years to complete

the project. Even today, decades later, the Chunnel is an amazing feat of engineering and collaboration. Seen through the lens of psychological science, it stands as an inspiring example of what is possible when people work together. Humans *need* to cooperate with others to survive and to thrive. <u>Cooperation</u>, or the coordination of multiple individuals toward a goal that benefits the entire group, is a fundamental feature of human social life.

The Channel Tunnel – an example of real-world cooperation between people. [Image: Sam Churchill, http://goo.gl/ildZrk, CC BY 2.0, http://goo.gl/v4Y0Zv]

Whether on the playground with friends, at home with family, or at work with colleagues, cooperation is a natural instinct (Keltner, Kogan, Piff, & Saturn, 2014). Children as young as 14 months cooperate with others on joint tasks (Warneken, Chen, & Tomasello 2006; Warneken & Tomasello, 2007). Humans' closest evolutionary relatives, chimpanzees and bonobos, maintain long-term cooperative relationships as well, sharing resources and caring for each other's young (de Waal & Lanting, 1997; Langergraber, Mitani, & Vigilant, 2007). Ancient animal remains found near early human settlements suggest that our ancestors hunted in cooperative groups (Mithen, 1996). Cooperation, it seems, is embedded in our evolutionary heritage.

Yet, cooperation can also be difficult to achieve; there are often breakdowns in people's ability to work effectively in teams, or in their willingness to collaborate with others. Even with issues that can only be solved through large-scale cooperation, such as climate change and world hunger, people can have difficulties joining forces with others to take collective action. Psychologists have identified numerous individual and situational factors that influence the effectiveness of cooperation across many areas of life. From the trust that people place in

others to the lines they draw between "us" and "them," many different processes shape cooperation. This module will explore these individual, situational, and cultural influences on cooperation.

The Prisoner's Dilemma

Imagine that you are a participant in a social experiment. As you sit down, you are told that you will be playing a game with another person in a separate room. The other participant is also part of the experiment but the two of you will never meet. In the experiment, there is the possibility that you will be awarded some money. Both you and your unknown partner are required to make a choice: either choose to "cooperate," maximizing your combined reward, or "defect," (not cooperate) and thereby maximize your individual reward. The choice you make, along with that of the other participant, will result in one of three unique outcomes to this task, illustrated below in Figure 1. If you and your partner *both cooperate* (1), you will each receive $5. If you and your partner *both defect* (2), you will each receive $2. However, if *one partner defects and the other partner cooperates* (3), the defector will receive $8, while the cooperator will receive nothing. Remember, you and your partner cannot discuss your strategy. Which would you choose? Striking out on your own promises big rewards but you could also lose everything. Cooperating, on the other hand, offers the best benefit for the most people but requires a high level of trust.
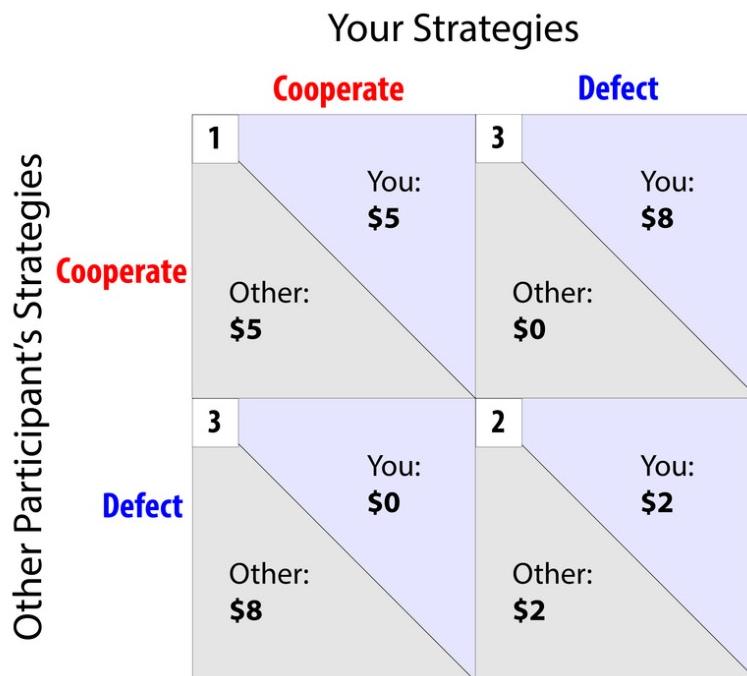
Figure 1. The various possible outcomes of a prisoner's dilemma scenario

This scenario, in which two people independently choose between cooperation and defection, is known as the **prisoner's dilemma**. It gets its name from the situation in which two prisoners who have committed a crime are given the opportunity to either (A) both confess their crime (and get a moderate sentence), (B) rat out their accomplice (and get a lesser sentence), or (C) both remain silent (and avoid punishment altogether). Psychologists use various forms of the prisoner's dilemma scenario to study self-interest and cooperation. Whether framed as a monetary game or a prison game, the prisoner's dilemma illuminates a conflict at the core of many decisions to cooperate: it pits the motivation to maximize *personal reward* against the motivation to maximize *gains for the group* (you and your partner combined).

For someone trying to maximize his or her own personal reward, the most "rational" choice is to defect (not cooperate), because defecting always results in a larger personal reward, regardless of the partner's choice. However, when the two participants view their partnership as a joint effort (such as a friendly relationship), cooperating is the best strategy of all, since it provides the largest combined sum of money ($10—which they share), as opposed to partial cooperation ($8), or mutual defection ($4). In other words, although defecting represents the "best" choice from an individual perspective, it is also the worst choice to make for the group as a whole.

This divide between personal and collective interests is a key obstacle that prevents people from cooperating. Think back to our earlier definition of cooperation: cooperation is when multiple partners work together toward a common goal that will benefit everyone. As is frequent in these types of scenarios, even though cooperation may benefit the whole group, individuals are often able to earn even larger, personal rewards by defecting—as demonstrated in the prisoner's dilemma example above.

Do you like music? You can see a small, real-world example of the prisoner's dilemma phenomenon at live music concerts. At venues with seating, many audience members will choose to stand, hoping to get a better view of the musicians onstage. As a result, the people sitting directly behind those now-standing people are also forced to stand to see the action onstage. This creates a chain reaction in which the entire audience now has to stand, just to see over the heads of the crowd in front of them. While choosing to stand may improve one's own concert experience, it creates a literal barrier for the rest of the audience, hurting the overall experience of the group.

Simple models of **rational self-interest** predict 100% defection in cooperative tasks. That is, if people were only interested in benefiting themselves, we would always expect to see selfish behavior. Instead, there is a surprising tendency to cooperate in the prisoner's dilemma and similar tasks (Batson & Moran, 1999; Oosterbeek, Sloof, Van De Kuilen, 2004). Given the clear

benefits to defect, why then do some people choose to cooperate, whereas others choose to defect?

Individual Differences in Cooperation

Social Value Orientation

One key factor related to individual differences in cooperation is the extent to which people value not only their own outcomes, but also the outcomes of others. Social value orientation (SVO) describes people's preferences when dividing important resources between themselves and others (Messick & McClintock, 1968). A person might, for example, generally be competitive with others, or cooperative, or self-sacrificing. People with different social values differ in the importance they place on their own positive outcomes relative to the outcomes of others. For example, you might give your friend gas money because she drives you to school, even though that means you will have less spending money for the weekend. In this example, you are demonstrating a cooperative orientation.

People generally fall into one of three categories of SVO: cooperative, individualistic, or competitive. While most people want to bring about positive outcomes for all (cooperative orientation), certain types of people are less concerned about the outcomes of others (individualistic), or even seek to undermine others in order to get ahead (competitive orientation).

Are you curious about your own orientation? One technique psychologists use to sort people into one of these categories is to have them play a series of decomposed games—short laboratory exercises that involve making a choice from various distributions of resources between oneself and an "other." Consider the example shown in Figure 2, which offers three

SVO decomposed game	A	B	C
You get	500	500	550
Other gets	100	500	300

Figure 2. Example of an SVO decomposed game used to determine how competitive or cooperative a person is.

different ways to distribute a valuable resource (such as money). People with *competitive* SVOs, who try to maximize their relative advantage over others, are most likely to pick option A. People with *cooperative* SVOs, who try to maximize joint gain for both themselves and others, are more likely to split the resource evenly, picking option B. People with *individualistic* SVOs, who always maximize gains to the self, regardless of how it affects others, will most likely pick option C.

Researchers have found that a person's SVO predicts how cooperative he or she is in both laboratory experiments and the outside world. For example, in one laboratory experiment, groups of participants were asked to play a commons dilemma game. In this game, participants each took turns drawing from a central collection of points to be exchanged for real money at the end of the experiment. These points represented a common-pool resource for the group, like valuable goods or services in society (such as farm land, ground water, and air quality) that are freely accessible to everyone but prone to overuse and degradation. Participants were told that, while the common-pool resource would gradually replenish after the end of every turn, taking too much of the resource too quickly would eventually deplete it. The researchers found that participants with cooperative SVOs withdrew fewer resources from the common-pool than those with competitive and individualistic SVOs, indicating a greater willingness to cooperate with others and act in a way that is sustainable for the group (Kramer, McClintock, & Messick, 1986; Roch & Samuelson, 1997).

Research has also shown that people with cooperative SVOs are more likely to commute to work using public transportation—an act of cooperation that can help reduce carbon emissions—rather than drive themselves, compared to people with competitive and individualistic SVOs (Van Vugt, Meertens, & Van Lange, 1995; Van Vugt, Van Lange, & Meertens, 1996). People with cooperative SVOs also more frequently engage in behavior intended to help others, such as volunteering and giving money to charity (McClintock & Allison, 1989; Van Lange, Bekkers, Schuyt, Van Vugt, 2007). Taken together, these findings show that people with cooperative SVOs act with greater consideration for the overall well-being of others and the group as a whole, using resources in moderation and taking more effortful measures (like using public transportation to protect the environment) to benefit the group.

Empathic Ability

Empathy is the ability to feel and understand another's emotional experience. When we empathize with someone else, we take on that person's perspective, imagining the world from his or her point of view and vicariously experiencing his or her emotions (Davis, 1994; Goetz, Keltner, & Simon-Thomas, 2010). Research has shown that when people empathize with their

Feelings of empathy lead to greater levels of cooperation. Research shows that even young children cooperate more when experiencing feelings of empathy. [Image: US Army, https://goo.gl/psWXOe, CC BY 2.0, https://goo.gl/BRvSA7]

partner, they act with greater cooperation and overall altruism—the desire to help the partner, even at a potential cost to the self. People that can experience and understand the emotions of others are better able to work with others in groups, earning higher job performance ratings on average from their supervisors, even after adjusting for different types of work and other aspects of personality (Co^té & Miners, 2006).

When empathizing with a person in distress, the natural desire to help is often expressed as a desire to cooperate. In one study, just before playing an economic game with a partner in another room, participants were given a note revealing that their partner had just gone through a rough breakup and needed some cheering up. While half of the subjects were urged by the experimenters to "remain objective and detached," the other half were told to "try and imagine how the other person feels." Though both groups received the same information about their partner, those who were encouraged to engage in empathy—by actively experiencing their partner's emotions—acted with greater cooperation in the economic game (Batson & Moran, 1999). The researchers also found that people who empathized with their partners were more likely to act cooperatively, even after being told that their partner had already made a choice to *not* cooperate (Batson & Ahmad, 2001)! Evidence of the link between empathy and cooperation has even been found in studies of preschool children (Marcus, Telleen, & Roke, 1979). From a very early age, emotional understanding can foster cooperation.

Although empathizing with a partner can lead to more cooperation between two people, it can also undercut cooperation within larger groups. In groups, empathizing with a single person can lead people to abandon broader cooperation in favor of helping only the target individual. In one study, participants were asked to play a cooperative game with three partners. In the game, participants were asked to (A) donate resources to a central pool, (B) donate resources to a specific group member, or (C) keep the resources for themselves. According to the rules, all donations to the central pool would be increased by 50% then distributed evenly, resulting in a net gain to the entire group. Objectively, this might seem to be the best option. However, when participants were encouraged to imagine the feelings of

one of their partners said to be in distress, they were more likely to donate their tickets to that partner and not engage in cooperation with the group—rather than remaining detached and objective (Batson et al., 1995). Though empathy can create strong cooperative bonds between individuals, it can sometimes lead to actions that, despite being well-intentioned, end up undermining the group's best interests.

Situational Influences of Cooperation

Communication and Commitment

Open communication between people is one of the best ways to promote cooperation (Dawes, McTavish, & Shaklee, 1977; Dawes, 1988). This is because communication provides an opportunity to size up the trustworthiness of others. It also affords us a chance to prove our own trustworthiness, by verbally committing to cooperate with others. Since cooperation requires people to enter a state of vulnerability and trust with partners, we are very sensitive to the social cues and interactions of potential partners before deciding to cooperate with them.

In one line of research, groups of participants were allowed to chat for five minutes before playing a multi-round "public goods" game. During the chats, the players were allowed to discuss game strategies and make verbal commitments about their in-game actions. While some groups were able to reach a consensus on a strategy (e.g., "always cooperate"), other groups failed to reach a consensus within their allotted five minutes or even picked strategies that ensured *non*cooperation (e.g., "every person for themselves"). The researchers found that when group members made explicit commitments to each other to cooperate, they ended up honoring those commitments and acting with greater cooperation. Interestingly, the effect of face-to-face verbal commitments persisted even when the cooperation game itself was completely anonymous (Kerr and Kaufman-Gilliland, 1994; Kerr, Garst, Lewandowski, & Harris, 1997). This suggests that those who explicitly commit to cooperate are driven not by the fear of external punishment by group members, but by their own personal desire to honor such commitments. In other words, once people make a specific promise to cooperate, they are driven by "that still, small voice"—the voice of their own inner conscience—to fulfill that commitment (Kerr et al., 1997).

Trust

When it comes to cooperation, trust is key (Pruitt & Kimmel, 1977; Parks, Henager, &

Trust is essential for cooperation, people are much more motivated to cooperate if they know others in the group will support one another. [Image: Wesley Fryer, https://goo.gl/LKNLWp, CC BY-SA 2.0, https://goo.gl/rxiUsF]

Scamahorn, 1996; Chaudhuri, Sopher, & Strand, 2002). Working with others toward a common goal requires a level of faith that our partners will repay our hard work and generosity, and not take advantage of us for their own selfish gains. Social trust, or the belief that another person's actions will be beneficial to one's own interests (Kramer, 1999), enables people to work together as a single unit, pooling their resources to accomplish more than they could individually. Trusting others, however, depends on their actions and reputation.

One common example of the difficulties in trusting others that you might recognize from being a student occurs when you are assigned a group project. Many students dislike group projects because they worry about "social loafing"—the way that one person expends less effort but still benefits from the efforts of the group. Imagine, for example, that you and five other students are assigned to work together on a difficult class project. At first, you and your group members split the work up evenly. As the project continues, however, you notice that one member of your team isn't doing his "fair share." He fails to show up to meetings, his work is sloppy, and he seems generally uninterested in contributing to the project. After a while, you might begin to suspect that this student is trying to get by with minimal effort, perhaps assuming others will pick up the slack. Your group now faces a difficult choice: either join the slacker and abandon all work on the project, causing it to collapse, or keep cooperating and allow for the possibility that the uncooperative student may receive a decent grade for others' work.

If this scenario sounds familiar to you, you're not alone. Economists call this situation the **free rider problem**—when individuals benefit from the cooperation of others without contributing anything in return (Grossman & Hart, 1980). Although these sorts of actions may benefit the free rider in the short-term, free riding can have a negative impact on a person's social reputation over time. In the above example, for instance, the "free riding" student may develop a reputation as lazy or untrustworthy, leading others to be less willing to work with him in the future.

Indeed, research has shown that a poor reputation for cooperation can serve as a warning

sign for others *not* to cooperate with the person in disrepute. For example, in one experiment involving a group economic game, participants seen as being uncooperative were punished harshly by their fellow participants. According to the rules of the game, individuals took turns being either a "donor" or a "receiver" over the course of multiple rounds. If donors chose to give up a small sum of actual money, receivers would receive a slightly larger sum, resulting in an overall net gain. However, unbeknownst to the group, one participant was secretly instructed *never* to donate. After just a few rounds of play, this individual was effectively shunned by the rest of the group, receiving almost zero donations from the other members (Milinski, Semmann, Bakker, & Krambeck, 2001). When someone is seen being consistently uncooperative, other people have no incentive to trust him/her, resulting in a collapse of cooperation.

On the other hand, people are more likely to cooperate with others who have a good reputation for cooperation and are therefore deemed trustworthy. In one study, people played a group economic game similar to the one described above: over multiple rounds, they took turns choosing whether to donate to other group members. Over the course of the game, donations were more frequently given to individuals who had been generous in earlier rounds of the game (Wedekind & Milinski, 2000). In other words, individuals seen cooperating with others were afforded a reputational advantage, earning them more partners willing to cooperate and a larger overall monetary reward.

Group Identification

Another factor that can impact cooperation is a person's social identity, or the extent to which he or she identifies as a member of a particular social group (Tajfel & Turner, 1979/1986). People can identify with groups of all shapes and sizes: a group might be relatively small, such as a local high school class, or very large, such as a national citizenship or a political party. While these groups are often bound together by shared goals and values, they can also form according to seemingly arbitrary qualities, such as musical taste, hometown, or even completely randomized assignment, such as a coin toss (Tajfel, Billig,

Sometimes the groups with which we identify can be formed based on preferences. Are you a dog person or a cat person? Just knowing that someone else shares your preference can affect the cooperation between you. [Image: Doris Meta F, https://goo.gl/k8Zi6N, CC BY-NC 2.0, https://goo.gl/tgFydH]

Bundy, & Flament, 1971; Bigler, Brown, & Markell, 2001; Locksley, Ortiz, & Hepburn, 1980). When members of a group place a high value on their group membership, their identity (the way they view themselves) can be shaped in part by the goals and values of that group.

When people strongly identify with a group, their own well-being becomes bound to the welfare of that group, increasing their willingness to make personal sacrifices for its benefit. We see this with sports fans. When fans heavily identify with a favorite team, they become elated when the team wins and sad when the team loses. Die-hard fans often make personal sacrifices to support their team, such as braving terrible weather, paying high prices for tickets, and standing and chanting during games.

Research shows that when people's group identity is emphasized (for example, when laboratory participants are referred to as "group members" rather than "individuals"), they are less likely to act selfishly in a commons dilemma game. In such experiments, so-called "group members" withdraw fewer resources, with the outcome of promoting the sustainability of the group (Brewer & Kramer, 1986). In one study, students who strongly identified with their university were less likely to leave a cooperative group of fellow students when given an attractive option to exit (Van Vugt & Hart, 2004). In addition, the strength of a person's identification with a group or organization is a key driver behind participation in large-scale cooperative efforts, such as collective action in political and workers' groups (Klandersman, 2002), and engaging in organizational citizenship behaviors (Cropanzano & Byrne, 2000).

Emphasizing group identity is not without its costs: although it can increase cooperation *within* groups, it can also undermine cooperation *between* groups. Researchers have found that groups interacting with other groups are more competitive and less cooperative than individuals interacting with other individuals, a phenomenon known as **interindividual-intergroup discontinuity** (Schopler & Insko, 1999; Wildschut, Pinter, Vevea, Insko, & Schopler, 2003). For example, groups interacting with other groups displayed greater self-interest and reduced cooperation in a prisoner's dilemma game than did individuals completing the same tasks with other individuals (Insko et al., 1987). Such problems with trust and cooperation are largely due to people's general reluctance to cooperate with members of an outgroup, or those outside the boundaries of one's own social group (Allport, 1954; Van Vugt, Biel, Snyder, & Tyler, 2000). **Outgroups** do not have to be explicit rivals for this effect to take place. Indeed, in one study, simply telling groups of participants that other groups preferred a different style of painting led them to behave less cooperatively than pairs of individuals completing the same task (Insko, Kirchner, Pinter, Efaw, & Wildschut, 2005). Though a strong group identity can bind individuals within the group together, it can also drive divisions between different groups, reducing overall trust and cooperation on a larger scope.

Culture

There are cultural differences in how and how much people cooperate. Some societies require more cooperation to ensure survival. [Image: Cindy Cornett Seigle, http://goo.gl/u0kE9Z, CC BY-NC-SA 2.0, http://goo.gl/iF4hmM]

Culture can have a powerful effect on people's beliefs about and ways they interact with others. Might culture also affect a person's tendency toward cooperation? To answer this question, Joseph Henrich and his colleagues surveyed people from 15 small-scale societies around the world, located in places such as Zimbabwe, Bolivia, and Indonesia. These groups varied widely in the ways they traditionally interacted with their environments: some practiced small-scale agriculture, others foraged for food, and still others were nomadic herders of animals (Henrich et al., 2001).

To measure their tendency toward cooperation, individuals of each society were asked to play the ultimatum game, a task similar in nature to the prisoner's dilemma. The game has two players: Player A (the "allocator") is given a sum of money (equal to two days' wages) and allowed to donate any amount of it to Player B (the "responder"). Player B can then either accept or reject Player A's offer. If Player B accepts the offer, both players keep their agreed-upon amounts. However, if Player B rejects the offer, then neither player receives anything. In this scenario, the responder can use his/her authority to punish unfair offers, even though it requires giving up his or her own reward. In turn, Player A must be careful to propose an acceptable offer to Player B, while still trying to maximize his/her own outcome in the game.

According to a model of rational economics, a self-interested Player B should always choose to accept any offer, no matter how small or unfair. As a result, Player A should always try to offer the minimum possible amount to Player B, in order to maximize his/her own reward. Instead, the researchers found that people in these 15 societies donated on average 39% of the sum to their partner (Henrich et al., 2001). This number is almost identical to the amount that people of Western cultures donate when playing the ultimatum game (Oosterbeek et al., 2004). These findings suggest that allocators in the game, instead of offering the least possible amount, try to maintain a sense of fairness and "shared rewards" in the game, in part so that

their offers will not be rejected by the responder.

Henrich and colleagues (2001) also observed significant variation between cultures in terms of their level of cooperation. Specifically, the researchers found that the extent to which individuals in a culture needed to collaborate with each other to gather resources to survive predicted how likely they were to be cooperative. For example, among the people of the Lamelara in Indonesia, who survive by hunting whales in groups of a dozen or more individuals, donations in the ultimatum game were extremely high—approximately 58% of the total sum. In contrast, the Machiguenga people of Peru, who are generally economically independent at the family level, donated much less on average—about 26% of the total sum. The interdependence of people for survival, therefore, seems to be a key component of why people decide to cooperate with others.

Though the various survival strategies of small-scale societies might seem quite remote from your own experiences, take a moment to think about how your life is dependent on collaboration with others. Very few of us in industrialized societies live in houses we build ourselves, wear clothes we make ourselves, or eat food we grow ourselves. Instead, we depend on others to provide specialized resources and products, such as food, clothing, and shelter that are essential to our survival. Studies show that Americans give about 40% of their sum in the ultimatum game—less than the Lamelara give, but on par with most of the small-scale societies sampled by Henrich and colleagues (Oosterbeek et al., 2004). While living in an industrialized society might not require us to hunt in groups like the Lamelara do, we still depend on others to supply the resources we need to survive.

Conclusion

Cooperation is an important part of our everyday lives. Practically every feature of modern social life, from the taxes we pay to the street signs we follow, involves multiple parties working together toward shared goals. There are many factors that help determine whether people will successfully cooperate, from their culture of origin and the trust they place in their partners, to the degree to which they empathize with others. Although cooperation can sometimes be difficult to achieve, certain diplomatic practices, such as emphasizing shared goals and engaging in open communication, can promote teamwork and even break down rivalries. Though choosing not to cooperate can sometimes achieve a larger reward for an individual in the short term, cooperation is often necessary to ensure that the group as a whole––including all members of that group—achieves the optimal outcome.

Outside Resources

Article: Weber, J. M., Kopelman, S., & Messick, D. M. (2004). A conceptual review of decision making in social dilemmas: Applying a logic of appropriateness. Personality and Social Psychology Review, 8(3), 281-307.
http://psr.sagepub.com/content/8/3/281.abstract

Video: A clip from a reality TV show, "Golden Balls", that pits players against each other in a high-stakes Prisoners' Dilemma situation.
https://www.youtube.com/watch?v=p3Uos2fzIJ0

Video: Describes recent research showing how chimpanzees naturally cooperate with each other to accomplish tasks.
https://www.youtube.com/watch?v=fME0_RsEXiI

Video: The Empathic Civilization - A 10 minute, 39 second animated talk that explores the topics of empathy.
https://www.youtube.com/watch?v=xjarMIXA2q8

Video: Tragedy of the Commons, Part 1 - What happens when many people seek to share the same, limited resource?
https://www.youtube.com/watch?v=KZDjPnzoge0

Video: Tragedy of the Commons, Part 2 - This video (which is 1 minute, 27 seconds) discusses how cooperation can be a solution to the commons dilemma.
https://www.youtube.com/watch?v=IVwk6VIxBXg

Video: Understanding the Prisoners' Dilemma.
https://www.youtube.com/watch?v=t9Lo2fgxWHw

Video: Why Some People are More Altruistic Than Others - A 12 minute, 21 second TED talk about altruism. A psychologist, Abigail Marsh, discusses the research about altruism.
https://www.youtube.com/watch?v=m4KbUSRfnR4

Web: Take an online test to determine your Social Values Orientation (SVO).
http://vlab.ethz.ch/svo/index-normal.html

Web: What is Social Identity? - A brief explanation of social identity, which includes specific

examples.
http://people.howstuffworks.com/what-is-social-identity.htm

Discussion Questions

1. Which groups do you identify with? Consider sports teams, home towns, and universities. How does your identification with these groups make you feel about other members of these groups? What about members of competing groups?

2. Thinking of all the accomplishments of humanity throughout history which do you believe required the greatest amounts of cooperation? Why?

3. In your experience working on group projects—such as group projects for a class—what have you noticed regarding the themes presented in this module (eg. Competition, free riding, cooperation, trust)? How could you use the material you have just learned to make group projects more effective?

Vocabulary

Altruism
A desire to improve the welfare of another person, at a potential cost to the self and without any expectation of reward.

Common-pool resource
A collective product or service that is freely available to all individuals of a society, but is vulnerable to overuse and degradation.

Commons dilemma game
A game in which members of a group must balance their desire for personal gain against the deterioration and possible collapse of a resource.

Cooperation
The coordination of multiple partners toward a common goal that will benefit everyone involved.

Decomposed games
A task in which an individual chooses from multiple allocations of resources to distribute between him- or herself and another person.

Empathy
The ability to vicariously experience the emotions of another person.

Free rider problem
A situation in which one or more individuals benefit from a common-pool resource without paying their share of the cost.

Interindividual-intergroup discontinuity
The tendency for relations between groups to be less cooperative than relations between individuals.

Outgroup
A social category or group with which an individual does not identify.

Prisoner's dilemma
A classic paradox in which two individuals must independently choose between defection

(maximizing reward to the self) and cooperation (maximizing reward to the group).

Rational self-interest
The principle that people will make logical decisions based on maximizing their own gains and benefits.

Social identity
A person's sense of who they are, based on their group membership(s).

Social value orientation (SVO)
An assessment of how an individual prefers to allocate resources between him- or herself and another person.

State of vulnerability
When a person places him or herself in a position in which he or she might be exploited or harmed. This is often done out of trust that others will not exploit the vulnerability.

Ultimatum game
An economic game in which a proposer (Player A) can offer a subset of resources to a responder (Player B), who can then either accept or reject the given proposal.

References

Allport, G.W. (1954). *The nature of prejudice*. Cambridge, MA: Addison-Wesley.

Batson, C. D., & Ahmad, N. (2001). Empathy-induced altruism in a prisoner's dilemma II: What if the target of empathy has defected? *European Journal of Social Psychology*, 31(1), 25-36.

Batson, C. D., & Moran, T. (1999). Empathy-induced altruism in a prisoner's dilemma. *European Journal of Social Psychology*, 29(7), 909-924.

Batson, C. D., Batson, J. G., Todd, R. M., Brummett, B. H., Shaw, L. L., & Aldeguer, C. M. (1995). Empathy and the collective good: Caring for one of the others in a social dilemma. *Journal of Personality and Social Psychology*, 68(4), 619.

Bigler R.S., Brown C.S., Markell M. (2001). When groups are not created equal: Effects of group status on the formation of intergroup attitudes in children. *Child Development*, 72(4), 1151–1162.

Brewer, M. B., & Kramer, R. M. (1986). Choice behavior in social dilemmas: Effects of social identity, group size, and decision framing. *Journal of Personality and Social Psychology*, 50 (3), 543-549.

Chaudhuri, A., Sopher, B., & Strand, P. (2002). Cooperation in social dilemmas, trust and reciprocity. *Journal of Economic Psychology*, 23(2), 231-249.

Cote, S., & Miners, C. T. (2006). Emotional intelligence, cognitive intelligence, and job performance. *Administrative Science Quarterly*, 51(1), 1-28.

Cropanzano R., & Byrne Z.S. (2000). Workplace justice and the dilemma of organizational citizenship. In M. Van Vugt, M. Snyder, T. Tyler, & A. Biel (Eds.), *Cooperation in Modern Society: Promoting the Welfare of Communities, States and Organizations* (pp. 142-161). London: Routledge.

Davis, M. H. (1994). *Empathy: A social psychological approach*. Westview Press.

Dawes, R. M., & Kagan, J. (1988). *Rational choice in an uncertain world*. Harcourt Brace Jovanovich.

Dawes, R. M., McTavish, J., & Shaklee, H. (1977). Behavior, communication, and assumptions about other people's behavior in a commons dilemma situation. *Journal of Personality and Social Psychology*, 35(1), 1.

De Waal, F.B.M., & Lanting, F. (1997). *Bonobo: The forgotten ape*. University of California Press.

Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: An evolutionary analysis and empirical review. *Psychological Bulletin*, 136(3), 351-374.

Grossman, S. J., & Hart, O. D. (1980). Takeover bids, the free-rider problem, and the theory of the corporation. T*he Bell Journal of Economics*, 42-64.

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of homo economicus: Behavioral experiments in 15 small-scale societies. *The American Economic Review*, 91(2), 73-78.

Insko, C. A., Kirchner, J. L., Pinter, B., Efaw, J., & Wildschut, T. (2005). Interindividual-intergroup discontinuity as a function of trust and categorization: The paradox of expected cooperation. *Journal of Personality and Social Psychology*, 88(2), 365-385.

Insko, C. A., Pinkley, R. L., Hoyle, R. H., Dalton, B., Hong, G., Slim, R. M., ... & Thibaut, J. (1987). Individual versus group discontinuity: The role of intergroup contact. *Journal of Experimental Social Psychology*, 23(3), 250-267.

Keltner, D., Kogan, A., Piff, P. K., & Saturn, S. R. (2014). The sociocultural appraisals, values, and emotions (SAVE) framework of prosociality: Core processes from gene to meme. *Annual Review of Psychology*, 65, 425-460.

Kerr, N. L., & Kaufman-Gilliland, C. M. (1994). Communication, commitment, and cooperation in social dilemma. *Journal of Personality and Social Psychology*, 66(3), 513-529.

Kerr, N. L., Garst, J., Lewandowski, D. A., & Harris, S. E. (1997). That still, small voice: Commitment to cooperate as an internalized versus a social norm. *Personality and Social Psychology Bulletin*, 23(12), 1300-1311.

Klandermans, B. (2002). How group identification helps to overcome the dilemma of collective action. *American Behavioral Scientist*, 45(5), 887-900.

Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50(1), 569-598.

Kramer, R. M., McClintock, C. G., & Messick, D. M. (1986). Social values and cooperative response to a simulated resource conservation crisis. *Journal of Personality*, 54(3), 576-582.

Langergraber, K. E., Mitani, J. C., & Vigilant, L. (2007). The limited impact of kinship on cooperation in wild chimpanzees. *Proceedings of the National Academy of Sciences*, 104(19), 7786-7790.

Locksley, A., Ortiz, V., & Hepburn, C. (1980). Social categorization and discriminatory behavior: Extinguishing the minimal intergroup discrimination effect. *Journal of Personality and Social Psychology*, 39(5), 773-783.

Marcus, R. F., Telleen, S., & Roke, E. J. (1979). Relation between cooperation and empathy in young children. *Developmental Psychology*, 15(3), 346.

McClintock, C. G., & Allison, S. T. (1989). Social value orientation and helping behavior. *Journal of Applied Social Psychology*, 19(4), 353-362.

Messick, D. M., & McClintock, C. G. (1968). Motivational bases of choice in experimental games.

Journal of Experimental Social Psychology, 4(1), 1-25.

Milinski, M., Semmann, D., Bakker, T. C., & Krambeck, H. J. (2001). Cooperation through indirect reciprocity: Image scoring or standing strategy? *Proceedings of the Royal Society of London B: Biological Sciences*, 268(1484), 2495-2501.

Mithen, S. (1999). *The prehistory of the mind: The cognitive origins of art, religion and science*. Thames & Hudson Publishers.

Oosterbeek, H., Sloof, R., & Van De Kuilen, G. (2004). Cultural differences in ultimatum game experiments: Evidence from a meta-analysis. *Experimental Economics*, 7(2), 171-188.

Parks, C. D., Henager, R. F., & Scamahorn, S. D. (1996). Trust and reactions to messages of intent in social dilemmas. *Journal of Conflict Resolution*, 40(1), 134-151.

Pruitt, D. G., & Kimmel, M. J. (1977). Twenty years of experimental gaming: Critique, synthesis, and suggestions for the future. *Annual Review of Psychology*, 28, 363-392.

Roch, S. G., & Samuelson, C. D. (1997). Effects of environmental uncertainty and social value orientation in resource dilemmas. *Organizational Behavior and Human Decision Processes*, 70(3), 221-235.

Schopler, J., & Insko, C. A. (1999). The reduction of the interindividual-intergroup discontinuity effect: The role of future consequences. In M. Foddy, M. Smithson, S. Schneider, & M. Hogg (Eds.), *Resolving social dilemmas: Dynamic, structural, and intergroup aspects* (pp. 281-294). Philadelphia: Psychology Press.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago, IL: Nelson-Hall.

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, 1(2), 149-178.

Van Lange, P. A., Bekkers, R., Schuyt, T. N., & Vugt, M. V. (2007). From games to giving: Social value orientation predicts donations to noble causes. *Basic and Applied Social Psychology*, 29(4), 375-384.

Van Vugt M., Biel A., Snyder M., & Tyler T. (2000). Perspectives on cooperation in modern society: Helping the self, the community, and society. In M. Van Vugt, M. Snyder, T. Tyler, & A. Biel (Eds.), *Cooperation in Modern Society: Promoting the Welfare of Communities, States and Organizations* (pp. 3–24). London: Routledge.

Van Vugt, M., & Hart, C. M. (2004). Social identity as social glue: The origins of group loyalty.

Journal of Personality and Social Psychology, 86(4), 585-598.

Van Vugt, M., Meertens, R. M., & Lange, P. A. (1995). Car versus public transportation? The role of social value orientations in a real-life social dilemma. *Journal of Applied Social Psychology*, 25(3), 258-278.

Van Vugt, M., Van Lange, P. A., & Meertens, R. M. (1996). Commuting by car or public transportation? A social dilemma analysis of travel mode judgements. *European Journal of Social Psychology*, 26(3), 373-395.

Warneken, F., & Tomasello, M. (2007). Helping and cooperation at 14 months of age. *Infancy*, 11(3), 271-294.

Warneken, F., Chen, F., & Tomasello, M. (2006). Cooperative activities in young children and chimpanzees. *Child Development*, 77(3), 640-663.

Wedekind, C., & Milinski, M. (2000). Cooperation through image scoring in humans. *Science*, 288(5467), 850-852.

Wildschut, T., Pinter, B., Vevea, J. L., Insko, C. A., & Schopler, J. (2003). Beyond the group mind: A quantitative review of the interindividual-intergroup discontinuity effect. *Psychological Bulletin*, 129(5), 698-722.

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